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# The Bulletin of Zoological Nomenclature

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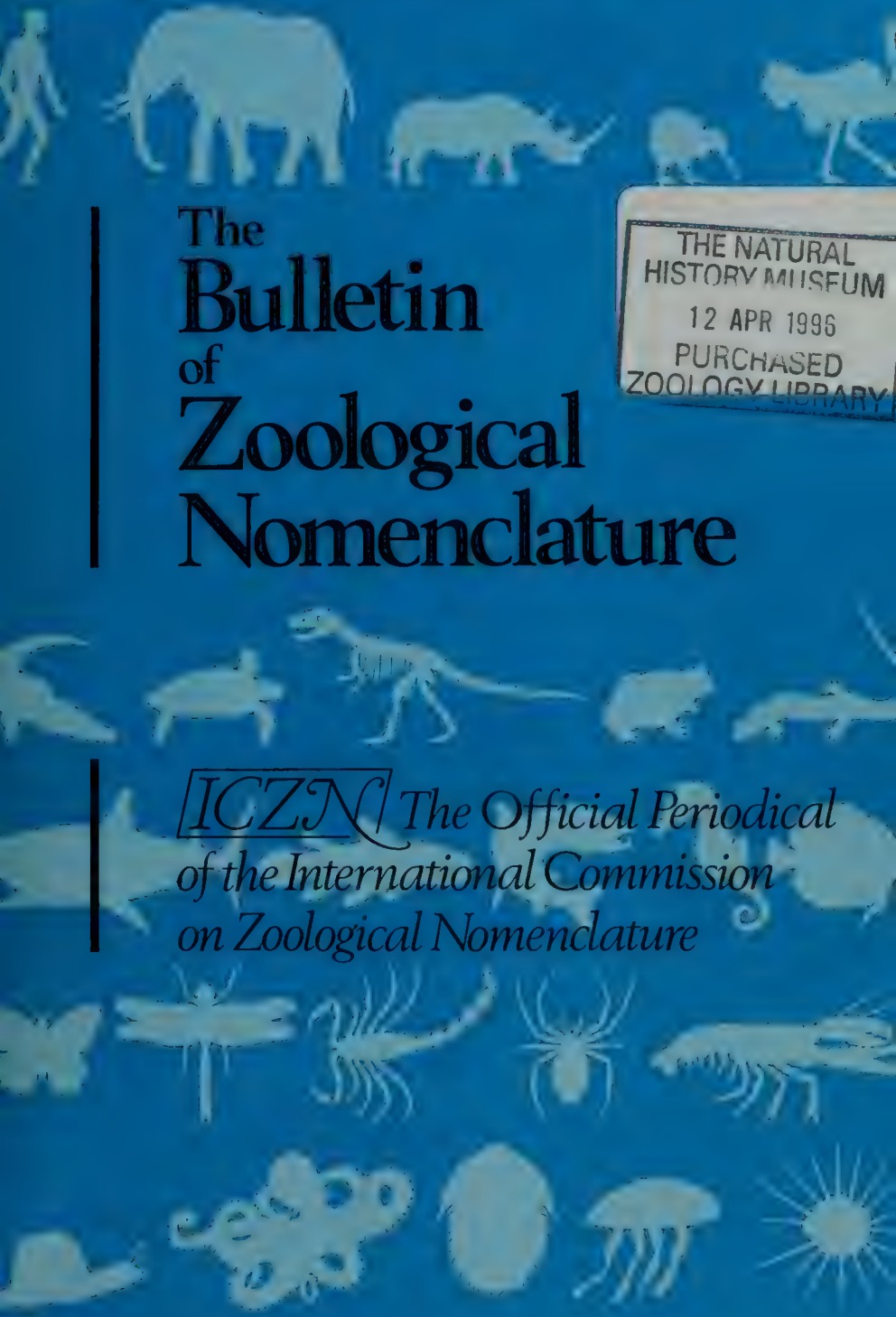

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BULLETIN OF ZOOLOGICAL NOMENCLATURE

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## Notices

(a) *Invitation to comment*. The Commission is authorised to vote on applications published in the *Bulletin of Zoological Nomenclature* six months after their publication but this period is normally extended to enable comments to be submitted. Any zoologist who wishes to comment on any of the applications is invited to send his contribution to the Executive Secretary of the Commission as quickly as possible.

(b) *Invitation to contribute general articles*. At present the *Bulletin* comprises mainly applications concerning names of particular animals or groups of animals, resulting comments and the Commission's eventual rulings (Opinions). Proposed amendments to the Code are also published for discussion.

Articles or notes of a more general nature are actively welcomed provided that they raise nomenclatural issues, although they may well deal with taxonomic matters for illustrative purposes. It should be the aim of such contributions to interest an audience wider than some small group of specialists.

(c) *Receipt of new applications*. The following new applications have been received since going to press for volume 52, part 4 (published on 20 December 1995). Under Article 80 of the Code, existing usage is to be maintained until the ruling of the Commission is published.

(1) *Australopithecus afarensis* Johanson, 1978 (Mammalia, Primates): proposed conservation of the specific name. (Case 2998). C.P. Groves.

(2) *Umbellula* Cuvier, 1798 (Cnidaria, Anthozoa): proposed conservation as the correct original spelling. (Case 2999). F.M. Bayer & M. Grasshoff.

(3) *Voluta bidentata* Montagu, 1808 (currently *Auriculinella bidentata*; Mollusca, Gastropoda): proposed conservation of the specific name. (Case 3000). F. Giusti & G. Manganelli.

(4) *Lactura* Walker, 1854 (Insecta, Lepidoptera): proposed conservation. (Case 3001). J.B. Heppner.

(5) *Papilio camillus* Fabricius, 1781 (currently *Cyrestis camillus*; Insecta, Lepidoptera): proposed conservation of the specific name. (Case 3002). T.B. Larsen.

(6) *Meristella* Hall, 1859 (Brachiopoda): proposed designation of *Atrypa laevis* Vanuxem, 1842 as the type species. (Case 3003). F. Alvarez.

(7) LORISIDAE Gray, 1821 and GALAGIDAE Gray, 1825 (Mammalia, Primates): proposed conservation as the correct original spellings. (Case 3004). J.H. Schwartz, J. Shoshani, I. Tattersall, E.L. Simons & G. Gunnell.

(8) *Crotalus ruber* Cope, 1892 (Reptilia, Serpentes): proposed precedence over *C. exsul* Garman, 1884. (Case 3005). H.M. Smith, L.E. Brown, D. Chiszar, L.L. Grismer, B.D. Hollingsworth, J.A. McGuire, P. Strimple & V. Wallach.

(9) *Pisidium lilljeborgii* Clessin *in* Esmark & Hoyer, 1886 (Mollusca, Bivalvia): proposed conservation of the specific name. (Case 3006). H. Kuiper.

(10) *Trematospira* Hall, 1858 (Brachiopoda): proposed designation of *Spirifer multistriatus* Hall, 1857 as the type species. (Case 3007). F. Alvarez.

(11) *Euchilus* Sandberger, 1870 and *Stalioa* Brusina, 1870: proposed designation of *Bithinia deschiensiana* Deshayes, 1862 and *Paludina desmarestii* Prévost, 1821 as the respective type species, with the conservation of *Bania* Brusina, 1896 (Mollusca, Gastropoda). (Case 3008). D. Kadolsky.

(12) *Polyrachis* Smith, 1857 (Insecta, Hymenoptera): proposed precedence over *Myrma* Billberg, 1820. (Case 3009). W.H.O. Dorow, R.J. Kohout & R.W. Taylor.

(13) Proposed conservation of usage of 15 mammal specific names based on wild species which are antedated by or contemporary with those based on domestic animals. (Case 3010). A. Gentry, J. Clutton-Brock & C.P. Groves.

(d) *Ruling of the Commission.* Each Opinion published in the *Bulletin* constitutes an official ruling of the International Commission on Zoological Nomenclature, by virtue of the votes recorded, and comes into force on the day of publication of the *Bulletin.*

## The International Commission on Zoological Nomenclature and its publications

*The International Commission on Zoological Nomenclature* was established in 1895 by the Third International Congress of Zoology, and at present consists of 26 zoologists from 17 countries whose interests cover most of the principal divisions (including palaeontology) of the animal kingdom. The Commission is under the auspices of the International Union of Biological Sciences (IUBS), and members are elected by zoologists attending General Assemblies of IUBS or Congresses of its associated bodies. Casual vacancies may be filled between Congresses. Nominations for membership may be sent to the Commission Secretariat at any time.

*The International Code of Zoological Nomenclature* has one fundamental aim, which is to provide 'the maximum universality and continuity in the scientific names of animals compatible with the freedom of scientists to classify all animals according to taxonomic judgements'. The latest (Third) Edition was published in 1985 by the International Trust for Zoological Nomenclature, acting on behalf of the Commission. A Fourth Edition is in the course of preparation and all zoologists are invited to comment on a discussion draft (see pp. 5–17).

Observance of the rules in the *Code* enables a biologist to arrive at the valid name for any animal taxon between and including the ranks of subspecies and superfamily. Its provisions can be waived or modified in their application to a particular case when strict adherence would cause confusion; however, this must never be done by an individual but only by the Commission, acting on behalf of all zoologists. The Commission takes such action in response to proposals submitted to it; applications should follow the instructions on the back page of the *Bulletin*, and assistance will be given by the Secretariat.

*The Bulletin of Zoological Nomenclature* is published four times each year. It contains applications for Commission action, as described above; their publication is

an invitation for any person to contribute comments or counter-suggestions, which may also be published. The Commission makes a ruling (called an Opinion) on a case only after a suitable period for comments. All Opinions are published in the *Bulletin*, which also contains articles and notes relevant to zoological nomenclature; such contributions may be sent to the Secretariat.

The Commission's rulings are summarised in *The Official Lists and Indexes of Names and Works in Zoology*; a single volume covering the period 1895–1985 was published in 1987, and a free supplement covering 1986–1990 was issued in 1991. Copies may be obtained from the Secretariat.

In addition to dealing with applications and other formal matters, the Commission's Secretariat is willing to help with advice on any question which may have nomenclatural (as distinct from purely taxonomic) implications.

*The International Trust for Zoological Nomenclature* is a charity (not-for-profit company) registered in the U.K. The Secretariat of the Commission is at present based in London, and the Trust is established there to handle the financial affairs of the Commission. The sale of publications (*Code*, *Bulletin* and *Official Lists and Indexes*) covers less than half of the costs of the service given to zoology by the Commission. Support is given by academies, research councils, associations and societies from a number of countries, and also by individuals, but despite this assistance the level of income remains a severe restraint and donations to the Trust are gratefully received.

For a more detailed discussion of the Commission and its activities see BZN **48**: 295–299 (December 1991). A Centenary History of the Commission — *Towards Stability in the Names of Animals* — was published in 1995 and is obtainable from the Secretariat.

## Addresses of members of the Commission

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## Call for nominations for new members of the International Commission on Zoological Nomenclature

There are vacancies on the Commission, and nominations of potential candidates for membership are invited. Nominations should be sent to the Executive Secretary by 1 June 1996; for details see BZN **52**: 118. Further vacancies have arisen by the resignations of Dr F.C. Thompson (U.S.A., Diptera) and Dr S.-I. Uéno (Japan, Entomology).

## International Congress on Systematic and Evolutionary Biology, Budapest, 17–24 August 1996

This Congress (ICSEB V) is being hosted by the Hungarian Academy of Sciences at the Education Centre, Budapest. Details of the numerous symposia and other activities may be obtained from the programme co-ordinator: Dr István Molnár, *Department of Genetics, Eötvös University, Múzeum krt 4/A, H-1088 Budapest, Hungary* (fax + 36–1 266–2694, e-mail molnari@ludens.elte.hu).

The symposia will include one for the discussion of the proposed fourth edition of the *International Code of Zoological Nomenclature* (see BZN **52**: 120, 121–125). All zoologists attending ICSEB V will be able to take part in elections to fill vacancies on the International Commission on Zoological Nomenclature.

## Fourth Edition of the International Code of Zoological Nomenclature

A discussion draft of a new (fourth) edition of the Code is available. Copies have been sent without charge to all subscribers to the *Bulletin* and to members of the American and European Associations for Zoological Nomenclature. Any other institution or individual may order a copy from the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD. The cost of printing and postage is about £3 or US$5. Bank charges on currency exchange make it uneconomic to pay this amount except in sterling or US dollars. The draft of the Code will therefore be sent free of charge, but those able to pay in sterling or US dollars are asked to enclose a cheque for £3 or US$5 to cover the cost.

Before completing the definitive text of the Fourth Edition, the Commission will (in accordance with Article 16 of its Constitution) take into account all comments and suggestions on the draft submitted within one year of its original distribution, i.e. by 31 May 1996.

## Discussion Draft of the Fourth Edition of the International Code of Zoological Nomenclature

(See also BZN **52**: 228–233, 294–302)

The following are amongst the comments which have been received. Further comments are invited; they should be sent as soon as possible to the Executive Secretary of the Commission. All comments received by 31 May 1996 will be fully considered by the Code Editorial Committee, whether or not they have been published in the *Bulletin*.

### (1) W.D.L. Ride (Chairman, Editorial Committee)

*Department of Geology, The Australian National University, P.O. Box 4, Canberra, A.C.T. 2600, Australia*

Article 11b in the discussion draft was prepared by the Editorial Committee to meet the objective of facilitating the introduction of names into the zoological literature by ensuring that every new name (no matter how obscurely or inaccessibly published) is made known to zoologists through the widest and most generally available medium, as well as in its original published work. This would reduce the likelihood of the subsequent discovery of overlooked names and displacement by them of synonyms that had been widely publicized from their initial publication.

Considering that zoologists would be unlikely to agree to a proposal that to become available every new name must be 'registered' with a central authority (as occurs in microbiology and is proposed for botany), with both availability and date of precedence determined by the act of registration, the Editorial Committee proposed for discussion that, while precedence would continue to be determined from the date of publication of the original work, to be available a new name must be recorded as such in *Zoological Record* within five years of its initial publication.

Authors are urged to assume responsibility for ensuring that the journal or monograph in which their new name is published is a work that is scanned by *Zoological Record* (proposed Recommendation 11A); the support of other zoologists using as yet unrecorded names is also envisaged (Recommendations 11B and 11C).

Comments on the draft (e.g. Crosskey, BZN **52**: 229–232) have drawn attention to the difficulty presented by the period of uncertainty or 'provisional availability' of new names resulting from this proposal. There have also been objections to *Zoological Record* being used in this way on grounds of its inaccessibility to some authors.

An alternative to making listing in *Zoological Record* a condition of availability has been proposed to the Editorial Committee, namely that listing should affect only the relative precedence of new names, leaving their availability unaffected.

By affecting validity only, such a provision would continue to support the principle that very obscure and unnoticed names should not be introduced retrospectively to displace names that have become used widely (even in a short time), but would not remove from authors the right to propose and make available names in whatever vehicle of publication they choose. It would maintain the continued availability of overlooked names to be used as valid when they did not threaten names in use.

The proposed use of *Zoological Record* would be maintained as the best means of notifying publication of new names. As well as being published on paper, *Zoological Record* is accessible electronically and on compact disk; this is of especial value to those outside major institutions. Its use on international electronic networks will increase steadily and, with the already agreed participation of its publishers, it will be easily possible for zoologists to determine free of charge whether a name has been recorded or not, or whether a work is scanned by *Zoological Record* (see Rosenberg, BZN **52**: 300).

As an example of the way in which a shift of the proposal to one that affected validity rather than the availability of a name could work, if only one of two available synonyms had been recorded within five years by *Zoological Record*, that name would have precedence over the other (which would remain available for use as a valid name when not regarded as synonymous with the recorded name). If neither name had been recorded, the normal rules for determining validity would apply.

Both advantages and disadvantages can be foreseen.

The Editorial Committee invites comment.

## (2) Walter J. Bock

*Department of Biological Sciences, Columbia University, New York 10027–7004, U.S.A.*

I should like first to make four general comments on the draft. (a) I consider that no rules in the Code should rely on the subjective judgments of zoologists, and that the need to refer cases to the Commission should be avoided wherever possible. (b) I urge strongly that a statement be inserted early in the Code that the name of the author and the date of publication are integral parts of the scientific name of any taxon. This is quite fundamental: for example, *Procellaria* Linnaeus, 1766 is not the same as *Procellaria* Linnaeus, 1758. (c) All the efforts of the Commission to conserve names are negated by the lack of any appropriate provision in the Code (cf. Article 78f). I know that the 1958 International Congress of Zoology failed to ratify the earlier rules and the original purpose of the Official Lists, but this does not prevent the Commission from formulating adequate rules; this must be done in the present revision of the Code. This matter and the proposed Lists of Available Names in particular taxonomic groups are so important that they should not be immersed in Articles 77 and 78, which deal with the powers and duties of the Commission; they should have Articles of their own. I would recommend strongly that names on the Official Lists should have precedence over other names, as many zoologists already believe to be the case; if not, then a clear statement must be made as to the purpose of the Lists. (d) The Editorial Committee have evidently decided that the numbering of Articles in the new Code should be exactly the same as in the current edition. While this is useful in principle, it is my strong feeling that the result is that material is put together into Articles in a confused way and that some material that should be placed prominently very early in the Code only appears much later, simply in order to preserve the numbering system. I urge that the primary concern should be the proper position of material in order to make the Code clearer to users.

Some specific points are as follows (I have supplied a considerable number of other details to the Editorial Committee). *Article 1b(3)*: the expression 'hybrids as such' is

confusing; the position with regard to taxa which are of hybrid origin should be clarified. *Article 2b*: the application of the Code to Protistan 'kingdoms' should be made clear. *Article 23j*: this will not work in its present wording, as there are systematists who do not accept that instability or confusion is *ever* caused by the adoption of a long-forgotten senior synonym of an estabished name. The provision should begin more explicitly: 'When the conditions of subsection (i) are met, an author must maintain existing usage ...'. *Article 23k*: this states that action taken under Article 23j(i) is invalid if the *prima facie* conditions are later found not to have been fully met. I disagree completely. It is important to maintain existing usage even if that is based on past errors, and the provision should state just the opposite, i.e. that a deliberate action under Article 23j(i) is still valid even if an error had been made; a zoologist disagreeing with the action could of course apply to the Commission for its reversal. *Article 31*: the suggested need to find the original spelling of adjectival epithets would impose a great deal of work, and require suitable library facilities; Professor Ernst Mayr has written to me, and I agree, that it would be 'a most adverse application of the principle of priority'. If gender agreement is abandoned the simplest solution would be to freeze the endings in the current usage. In any event it would be important to give an explanation so that zoologists could know why the Commission is proposing what appears, in the eyes of many, to be a stupid rule. *Article 76*: this needs to be completely rewritten, as do parts of Articles 77 and 78. While a brief historical note is needed, it would be totally embarrassing for the Commission to publish a new edition of the Code in the proposed form: the International Congresses of Zoology have been defunct for 25 years and will never be resurrected! The IUBS 'Section of Zoological Nomenclature' (see below) may be abolished also. *Article 78j(iii)*: it is not clear why this is confined to senior primary homonyms of species-group epithets: unlisted senior homonyms of genus-group names should also be unavailable (there are obvious objections to treating family-group homonyms in the same way). *Article 86*: this statement about pre-1758 names is completely out of place! *Article 88*: Does a Section of Nomenclature of IUBS actually exist, and if so will it continue? Is it, or for that matter IUBS itself, truly an international body of zoologists? The real answers to these questions should not be avoided, and they need to be seriously considered by the Commission before the Code is finalized.

## (3) A. Smetana

*Agriculture Canada, Centre for Land and Biological Resources Research, Ottawa, Ontario K1A OC6, Canada*

Please take note of my deepest concern and strong objection to some of the proposals for amendment of the Code; they do not promote the stability of zoological nomenclature which is the aim of the Code.

Such retrograde proposals are the compulsory recording of new names in order for them to remain available (Article 11b), the abandonment of gender agreement, and the acceptance of incorrect grammar in the formation of names. I appreciate that, in allowing grammatical laxity yet repeatedly 'urging' authors to be correct, the Editorial Committee has been forced to walk a tight-rope, but it is unfortunate that

the proposals were even put forward. We would have two types of species-group epithets: the correct ones of responsible authors who follow the recommendations and the bastardized ones of those who exploit the leniency of the new Code. Just look at Articles 30 and 31: firstly genus-group names are declared to be words without gender and then three pages of the draft deal with gender! If the suggested provisions are incorporated into the Code they would directly promote chaos and instability. After a while, zoologists would not be able to tell the status of a particular epithet. I most sincerely hope that these Articles in their proposed form will be deleted.

## (4) David Agassiz

*International Institute of Entomology, 56 Queen's Gate, London SW7 3JR, U.K.*

In the draft Code I am delighted to see things which really should help promote stability. I am Secretary of the European Lepidopterological Society, and at a recent Council meeting I found that members from major national museums were also pleased with many of the proposals. Some conservative zoologists have argued that name changes affect only a small number of people, and even then only for a short time. This simply is not true. Many users of names are not specialists and purely nomenclatural alterations cause confusion; for example, they mask faunal responses to environmental change.

I strongly support the proposal that new names be internationally notified, although the proposed '5-year rule' (Article 11b) does need modification.

The abandonment of gender in generic names could be helpful in the Lepidoptera; already this is practised by some systematists. I suggest, however, that where a particular termination of a specific name has been used for a period, say 50 years, it should have precedence over the original spelling.

I also support the 'automatic' precedence of junior synonyms which have been in established use for 50 years (Articles 23b and 23j).

## (5) Gary Rosenberg

*Academy of Natural Sciences, 1900 Benjamin Franklin Parkway, Philadelphia, Pennsylvania 19103–1195, U.S.A.*

In connection with the proposal that the endings of species-group epithets should always revert to their original forms, I should like to point out that new combinations often result from actions other than revisions of species-group taxa, for example changes in rank from subgenus to genus, or vice versa. These 'generic' actions may initially concern the fauna of regions irrelevant to a particular species, whose combination is later made consistent with the new classification. To force examination of the original ending of each species name in such cases would be ludicrous.

It must be remembered that non-scientists, such as copy editors, also deal with names. Under the current Code many of the adjectival names in a genus have similar endings, which is not only euphonious but makes them easier to scan for

errors. Under the draft proposals, compulsive people would have to keep referring to original descriptions to satisfy nagging doubt as to whether names had already been checked.

Even in cases where the generic placement has never changed, or when the original and later generic names have the same gender, the new rules might still force name changes. For example, apart from original errors, early authors often made specific names agree with '*varietas*' or '*forma*', which are feminine.

Under the new rules it will often be necessary to check whether epithets are adjectives or not [as a point of curiosity, I note that the Example in Article 31b and 48 of the draft (*Psittacus chrysostomus*, now *Neophema chrysostoma*) is inappropriate, since under Article 31b(i) of the current Code *chrysostomus* should be treated as a noun and hence invariant!].

So, what should be done about gender? Answer: leave things as they are.

## (6) Steve Shattuck

*Australian National Insect Collection, Division of Entomology, CSIRO, P.O. Box 1700, Canberra, ACT 2601, Australia*

I do not see that the present system of requiring gender agreement between generic names and adjectival epithets has advantages over adoption of the original epithet spellings. In many groups there are catalogues which give the original spellings, so there is no need to have access to the primary publications. The absence of gender requirements will simplify matters rather than complicate them, and will reduce errors. If the present system is abandoned people can spend more time doing taxonomy rather trying to comply with grammatical rules.

Many of the Lepidoptera catalogues of the past 10–15 years have ignored the gender requirement of the current Code and used the original endings of the species epithets. This departure is at least partly due to the problems in determining the correct gender of generic names. For example, the Code states (Article 30a(ii)) that the ending *-ops* makes a name masculine, but it can be feminine. This has caused many epithets to be spelt incorrectly.

## (7) Neal L. Evenhuis

*Department of Natural Sciences, Bishop Museum, P.O. Box 19000, Honolulu, Hawaii 96817–0916, U.S.A.*

I agree with the preceding comment by Steve Shattuck. As he mentions, there are many catalogs that give original spellings. He does not mention, however, a resource that gives the original spellings of nearly all (more than 98%) of the names published between 1758 and 1850: C.D. Sherborn's *Index Animalium*. This takes a huge chunk out of the so-called 'hard-to-get old papers and books'.

On a separate subject, I propose that Article 75d should be written to make it clear that specimens which are depicted in illustrations can be designated as neotypes; this would be consistent with the rule for syntypes, holotypes and lectotypes (Articles 72e, 73a and 74c). In many cases suitably diagnostic specimens cannot be physically preserved, and the Code should take account of this.

(8) Tomoyuki Miura

*Faculty of Fisheries, Kagoshima University, 4–50–20, Shimorata, Kagoshima, 890 Japan*

I think that English should be used for the diagnoses of new species. Its use as the official language would benefit not only speakers of European languages but also those of the rest of the world such as Chinese and Japanese. I believe that in the next few years there will be much more taxonomic work in Asian countries, and it will be a great help if new workers do not have to spend valuable time learning languages which are not essential for conveying scientific facts and thought.

(9) Hans Malicky

*Sonnengasse 13, A-3293 Lunz am See, Austria*

Article 8d of the draft permits names to be made available in works which are not printed on paper; presumably electronic media would be accepted as publications. I am most strongly opposed to this, and Article 8c should not be limited to works published before 1986. Computer-stored data do not constitute a permanent public scientific record; they are ephemeral and only accessible to the restricted group of workers who have the necessary resources and equipment.

I find it an excellent idea that new names should be recorded in *Zoological Record*, but Article 11b would cause much diifficulty. I suggest, at least as a Recommendation, that editors of journals and books should be responsible for notifying new names in accepted taxonomic manuscripts to the *Zoological Record* staff, who could immediately allocate a reference number to each name. This number would be published with the name, thereby informing readers that the name had been recorded; if a name had no number every reader would know that it should be brought to the attention of *Zoological Record.*

With regard to Article 16a, it has long been common practice to compare new taxa with related ones. But such a comparison may be useless in some cases; if it is made obligatory it could be a meaningless procedure in which 'comparison' is made with arbitrarily chosen taxa purely for formal compliance with the Code.

The draft does not contain the Appendices in the current Code; I think Appendices A-D are not necessary, and the size and cost of the new Code would be much reduced if they were omitted. Appendix E (General recommendations) is certainly useful, but the material in it is already in the running text of the Code.

(10) John Noyes

*Department of Entomology, The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.*

I should like to first make some general comments. The Code should be greatly simplified (especially if there is any intention to merge it with that for botanical names). Many of the proposals in the discussion document make the Code more complex and several, in my view, would actually cause instability. We should concentrate on the strict application (almost without exception) of the three main considerations of the Code, viz. availability, typification and priority; obviously

homonymy must be dealt with. The Code must define whether or not names are available if they are published other than on paper, e.g. on compact disk or electronically.

Since almost all taxonomists are not linguists or classical scholars it would be best to accept the original spellings of genus- and species-group names, changed in only such respects as the removal of diacritic marks and the transliteration of numerals. I am not in favour of the automatic conservation of junior synonyms on the grounds of usage (Article 23j), and prefer to adhere strictly to priority except in very rare circumstances.

I have some comments on individual Articles; as well as the following I have given others to the Editorial Committee. With respect to new names published after 1996, I believe that mandatory comparison with related taxa (Article 16a) is a good idea in principle, but that it will cause problems. If an author compares a new species with the others in the genus but does not explicitly mention all of them by name, some workers will accept the new name but others may not. I agree with Article 16e, which requires that new nominal taxa must be unambiguously marked as such. This will prevent new names being established accidentally, for instance in keys; in a recent publication on Russian Hymenoptera more than 30 specific names were not flagged as new, and they will inevitably be missed by *Zoological Record* and taxonomists. I believe that it should be obligatory (cf. Recommendation 16D) to deposit primary type specimens (holotypes or syntypes) in public institutions which allow them to be accessible.

## (11) Curtis W. Sabrosky

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As pointed out by Kerzhner & Starobogatov (BZN **52**: 297) and Bouchet (BZN **52**: 301), Article 13 of the draft differs from the current Code in that it exempts family-group names from the requirement that new names must be accompanied by a description of the taxon. This proposed change would be a giant step backward, and I disagree vehemently. It is not sufficient, in these modern times, merely to state the name of the type genus. Taxonomists faced with a new family-group name should not have to carry out time-consuming research merely to guess the author's basis for the proposal, in order to evaluate it for agreement or disagreement.

As I have commented before (BZN **52**: 298), the proposed abolition of gender for generic names has negative consequences. For example, the current Code (Article 30a(ii)) states that all the many names ending in *-ops* must be treated as masculine; this clear rule, reached after much debate, was a definite contribution to stability and uniformity. The draft merely suggests (Recommendation 31B(1)(ii)) that *-ops* names should be treated as masculine, and I consider this wording and position a retrograde step.

The draft (Article 68a, b) reverses the long-standing rule that original designation takes precedence over monotypy as the cited method of type species fixations. Surely stability demands continuity of rule as a basic principle of Code construction.

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The discussion draft does not resolve the ambiguity of many lectotype 'designations' made before 1997. An improved wording of Article 74a(i) might be as follows below. The date 1999 is specified because 1997 is far too soon to bring far-reaching and often controversial provisions into force. Many manuscripts already in press will not appear until 1997 or later, and we propose that the effective date of all the new rules in the Code should be 1 January 1999.

In a lectotype designation made before 1999, either the term lectotype (or an exact translation) must have been unambiguously applied to a particular specimen, or the author must have unambiguously indicated that he or she was making a deliberate selection of a particular syntype to act as the unique name-bearing type of a nominal species-group taxon. This indication must not have been made collectively (e.g. in the introduction to a work containing subsequent mention of 'type' specimens).

(13) Mark Wilkinson

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I should like to endorse and to emphasize the importance of Article 23b in the draft Code: 'The Principle of Priority is to be applied to promote stability of and universality of names and to prevent taxonomic confusion. Thus it must not be applied to upset a long-accepted name in its accustomed usage ... by the introduction of an older unused name ... or an action taken following the discovery of a prior and hitherto unrecognized nomenclatural act (such as a prior type fixation)'. The suppression by the Commission of long-unused synonyms and homonyms is a service to stability. Some authors take a different view; they maintain that a name is only valid if it is the earliest published name and that no other consideration should be taken into account. The principle of priority is not simply an algorithm that can invariably be used to produce a determinate solution, and it is entirely right that the Code prescribes restrictions on its application. The draft (Article 79c), like the existing Code, specifies *prima facie* criteria for the rejection of disused names and also provides (Article 79b) that these do not limit the powers of the Commission to act in the interests of stability. The credibility of the Code (and of the Commission) rests on how successful it is in meeting the needs of the wide community it serves, and not, as some say, on how rigidly it adheres to nomenclatural priority. I am glad that the draft recognizes this.

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In addition to my comments (BZN **52**: 229–232) opposing the proposition that the availability of new names should be dependent on their listing in *Zoological Record*, I should like to contribute further to the debate on the new Code.

Two general remarks are as follows. Many users of names who are not fully familiar with the Code understand 'species-group' only in the taxonomic sense of an assembly of species ranked below genus or subgenus, and similarly for genus- and family-group. This causes ambiguity, and I suggest that in the new Code 'species-group' etc. be replaced by 'species-tier' and so on. The word tier (or étage in French) conveys the idea of different hierarchical levels of names. A second general point is that Roman numerals (such as iv, XVIII) represent, for many, yet another European-origin system to be learned. I suggest that their use in the Code should be discontinued.

Some particular points are as follows.

(a) *Description of new family-group taxa (cf. Article 13a).* I agree with Curtis Sabrosky (comment 11 above): failure to require a description of a new family-group taxon would be a step back to the dark ages of nomenclature. The last three editions of the Code require characterization of the entity denoted by the name, and this must be continued.

(b) *Specific epithets and gender accord (Article 31b and elsewhere).* My comment is made from the standpoint of someone who has changed his mind on this. When editing the *Catalogue of Afrotropical Diptera* (1980) I spent much time in attempting to ensure correct gender agreement, where necessary, for the 16,000 species listed as valid; nevertheless some errors remained. At the time I was convinced that a simpler system must exist, and mandatory use of the original epithet spelling (i.e. Option 4 mentioned by Ride on BZN **52**: 229) seemed attractive. I now think that this superficially tempting course is undesirable. Amongst other difficulties, 'original spelling'— unless hedged with numerous caveats — would open the door to resuscitation of absurdities (e.g. *Simulium erythrocephalum* would change to *S. eritrocephala*). None of the other options mentioned by Ride seems any better and, as he notes, all have their disadvantages. Certainly gender agreement has its inconvenience but, given that there is no perfect solution, no overwhelming case can be made for concord abandonment or genderless generic names. I agree with Kerzhner & Starobogatov (BZN **52**: 216), Kabata (BZN **52**: 232), Sabrosky (BZN **52**: 298) and others that we should keep the present system: it is at least as good as any and has the merit of doing no violence to grammar.

(c) *Primary homonyms (Article 57b).* A sacred cow of nomenclature, perpetuated in the draft Code, is the insistence upon the replacement of junior primary homonyms in *all* circumstances. Few rules, however, are more destructive of stable nomenclature. Working with old literature, we sometimes find epithets which are senior primary homonyms. The species concerned may not have been considered congeneric in the past 200 years, or indeed ever; they may belong to higher taxa wholly remote in classification. Entomologists frequently come across such cases because of the very wide 18th-century concept of genera such as *Musca*; an example would be the Congo Floor Maggot (which produces myiasis in man), in which the formally correct but pointless adoption of an ancient synonym as valid upset the textbooks of medical parasitology. This is precisely the kind of change for the sake of 'nomenclature' which causes many to despair of the commonsense of taxonomists. We gain nothing from such dogma-based changes. I propose that if a junior primary homonym is published after 1999, or before 2000 but not previously recognized as a homonym, it should not be replaced (unless, of course, the taxa are considered congeneric).

(d) *Homonymy in specific epithets (Article 58).* There are innumerable instances where epithets 'of the same derivation and meaning' differ in spelling yet do not fit any of the 15 listed circumstances in which homonymy is deemed to exist; the most common class is that where the spelling difference results from variant ways of transcribing non-Latin alphabets. The difference may be in a single letter or may be major (*pekingensis*, *beijingensis*). It is implicit in Article 58 that epithets are not homonyms if they differ in even the most minor way so long as the difference is not covered by provisos 1–15; I suggest that this be made explicit.

## (15) Comments by some scientific staff of *The Natural History Museum, London*

This report records comments made by scientific staff of The Natural History Museum, London, at a Flora and Faunas Theme Workshop held on 24 November 1995 to consider a number of the changes in the Code as proposed in the discussion draft. The meeting was convened by Dr R. Huys and chaired by Dr R.A. Fortey. Sixty scientists from the Departments of Botany, Entomology, Palaeontology and Zoology attended.

*Availability of new names and need for ratification in* Zoological Record *(Articles 8e, 11b)*

Participants generally welcomed the concept of a comprehensive register of new names and expressed appreciation of the important role of Biosis in publishing *Zoological Record*. Inevitably there were problems in ensuring complete coverage of all new names, particularly those appearing in texts not using the Latin alphabet or names of ambiregnal organisms. Two representatives of Biosis U.K. were present and emphasised the importance of drawing attention to any names inadvertently omitted from *Zoological Record*; this was particularly important with books and with journals outside mainstream zoology and palaeontology. Biosis is developing a system whereby users of the Internet can, without charge, readily determine whether a name has been recorded in *Zoological Record*.

Participants thought that the concept of 'temporary' (or provisional) availability of names until ratified by publication in *Zoological Record* would lead to severe problems. It was likely that such a requirement would not be fully understood or implemented in some parts of the world, particularly by zoologists without access to *Zoological Record* in any form. It was undesirable to complicate the present rules for availability of names by introducing a secondary requirement which might not be met for as long as five years after the publication of a name.

The meeting, while recognizing the merits of registration of new names, was against publication in *Zoological Record* being a *requirement for availability*.

*Language and character set for diagnoses and fixation of types (Article 16b)*

Participants thought that the requirement that diagnoses and type fixations be published in 'a language using the Latin alphabet' would create a number of anomalies. Languages such as Danish or Turkish (used by few systematists) would be acceptable, while Chinese, Japanese and Russian (for example) would not. This could lead to inadequate or misleading diagnoses being published in a language not fully

understood by the author. The requirement would undoubtedly be ignored by some zoologists not familiar with any Latin alphabet language.

However, the establishment of a new taxon should be seen as an act of communication and scientists should be encouraged to ensure that it is understood by readers. The meeting thought it would be preferable to make it a recommendation (not a requirement) that diagnoses and type fixations should be given in one of a limited number of specified languages which are widely understood; there would be advantage in the use of English since this is generally recognized as, in effect, the language of international science.

*Stability: priority and usage (Articles 23j and 33d)*

The meeting generally favoured the retention of priority as the keystone of nomenclature and considered that the onus should be on the user of a junior synonym to defend its use. However, in the case of important names there should be some flexibility in allowing continued use of a junior name without requiring a Commission ruling. The present criterion (Article 79c) that, in the absence of any use of the senior synonym, ten papers using a junior name were adequate to make a *prima facie* case that stability was threatened was too inflexible. In some cases ten papers were too many and in other cases too few; more important was the general perception of the stable and wide (including non-specialist) usage of the junior name.

*Formation of family-group names (Articles 29a, 29c)*

The meeting strongly favoured the use of the whole generic name in the formation of new family-group names in order to avoid creating a name homonymous with one already established.

*Gender of genus-group names, and species-group epithets (Articles 30, 31)*

The meeting had mixed views on the proposal to abandon the concept of gender for generic names. Some participants would welcome intoduction of such a proposal for future combinations or perhaps making all new generic names have one gender. Others did not consider that there was a significant problem with the present rules and favoured their retention. It was pointed out that any requirement that the original spelling of a species-group epithet must be used would create great problems in many groups. It could result in many early names being spelt in forms not used for 200 or more years, from the time when the Latin 'j' was often rendered as 'i' ('iavanus') and the 'u' as 'v' ('-nevra'). Even with access to an extensive library it was often difficult to determine the original orthography, particularly where not only the ending had changed. Such a requirement would cause a degree of instability in nomenclature that would not be readily understood or implemented by all zoologists, particularly non-systematists.

*Misidentified type species, or type specimens not in accord with usage of names; status of rediscovered type specimens*

The meeting had no common view on whether a misidentified nominal species fixed as the type by the author of a new generic name should be accepted, or whether the taxonomic species actually used should be taken as the type (Articles 61e, 70b). However, with reference to the status of misidentified type specimens, it was generally

agreed that the proposal that existing usage should take precedence over the actual identity of types (Article 61e) was most undesirable; the name-bearing type should remain the objective standard of reference, with application to the Commission reserved for those special cases in which existing usage is to be preferred.

Few participants favoured the automatic retention (Articles 61f, 75j) of a neotype as the name-bearing type when the holotype was rediscovered and found to be conspecific with the neotype. It was felt that this might lead to lazy taxonomic practice and the devaluation of historically important collections. It was thought not normally necessary for the Commission to be involved in such cases. Zoologists should be encouraged to be more careful than at present in ensuring that the holotype no longer exists before designating a neotype.

*Adoption of Lists of Available and Potentially Valid Names (Article 77c)*

Participants discussed the proposal that the Commission should be enabled on request to adopt 'Lists of Available and Potentially Valid Names'. It was emphasised that all databases should be treated as continually under review and always evolving. Such was the case, for example, with the *Treatise on Invertebrate Paleontology* in which each edition was improved. There was a view that for the Commission to become involved with the proposed Lists, which would be definitive for names published before the cut-off dates, would tend to stifle not merely nomenclature but also taxonomic research. Furthermore, the preparation and vetting of such Lists would generate an enormous amount of extra work for taxonomists and for the Commission.

The general conclusion of the meeting was that the formal adoption of such Lists under the Commission's aegis was not of perceived value.

*Harmonization between Codes of nomenclature*

The meeting discussed briefly proposals for harmonization between Codes of nomenclature (Hawksworth *et al.*) as published in the *Bulletin of Zoological Nomenclature* and *Taxon*. It was important that the new edition of the *International Code of Zoological Nomenclature* should be developed in harmony with the proposed Unified Code, particularly in so far as ambiregnal taxa were concerned. Recognising that systematic papers were often in the press for up to two years it was essential to give a long lead time before implementation of any major changes.

## Case 2927

## *Nygolaimus* Cobb, 1913 (Nematoda): proposed designation of *Dorylaimus brachyuris* de Man, 1880 as the type species

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**Abstract.** The purpose of this application is to designate *Dorylaimus brachyuris* de Man, 1880 as the type species of the soil nematode genus *Nygolaimus* Cobb, 1913. At present the type is the nominal species *N. pachydermatus* Cobb, 1913, but this cannot be identified with any taxonomic species and may not even belong to the superfamily NYGOLAIMOIDEA as at present understood.

**Keywords.** Nomenclature; taxonomy; Nematoda; *Nygolaimus*; *Nygolaimus brachyuris*; soil nematodes.

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1. Cobb (1913, p. 441) described *Nygolaimus pachydermatus* n.g., n.sp., giving measurements based on a single specimen from Tokyo, Japan. He mentioned that 'other species occur in Eastern United States' but did not give any information about them.

2. The slide of the holotype is no longer present in Cobb's collection (see Heyns, 1968, p. 16). The description was very short and accompanied only by two drawings of the anterior end. The specimen had three odontostyles, showing that it was (as Cobb said) a juvenile and at the latest a J-3 moulting into the J-4 stage. From the description it is impossible to recognize the species *N. pachydermatus*, and several features (shape of lip region, shape of odontostyle, thick cuticle) raise serious doubts as to whether the specimen even belonged to the superfamily NYGOLAIMOIDEA as currently understood. *Nygolaimus pachydermatus* must be regarded as a nomen dubium, and no specimens have been assigned to the species since its original publication.

3. Subsequently many further species have been placed in *Nygolaimus* (see for example Thorne, 1930, Heyns, 1968 and Jairajpuri & Ahmad, 1992). Thorne (1935, p. 96) based a new subfamily NYGOLAIMINAE on the genus, placing it in the DORYLAIMIDAE; in 1961 this was raised to family rank by both Meyl (p. 104) and Clark (p. 138). Four years later de Coninck (1965, pp. 667, 670) treated the NYGOLAIMIDAE as the type of a superfamily NYGOLAIMOIDEA, and Ahmad & Jairajpuri (1979, p. 29) raised the nygolaims to subordinal rank as the Nygolaimina. The genus *Nygolaimus* thus occupies an important position in nematode classification as the

name-bearing type of a family, superfamily and (although this is not regulated by the Code) a suborder.

4. For this reason it is important that *Nygolaimus* should have a recognisable type species in accord with the accepted understanding of the genus, in which about 75 species are at present placed. An appropriate one is *Dorylaimus brachyuris* de Man, 1880 (p. 83), a cosmopolitan species which was placed in *Nygolaimus* by Thorne (1930, pp. 450, 454); Thorne misspelled the specific name as *brachyurus*. Thorne (1930) and Heyns (1968) divided *Nygolaimus* into subgenera, with *D. brachyuris* being in the nominotypical one. Loof (1961, p. 239) designated a female specimen with sufficient diagnostic details (original registration H 39) from de Man's 'Hollandsche Collectie' as the lectotype of *D. brachyuris*; this collection has now been incorporated into that of the Zoological Museum, University of Amsterdam, where the lectotype slide is registered as VAS 254. The specimen (from Katwijk, The Netherlands) was illustrated by Loof (1961, fig. 36) and was discussed and accepted as lectotype by Heyns (1968, p. 17). The collection of Wageningen Agricultural University contains numerous specimens from Katwijk and elsewhere which are unequivocally conspecific with the lectotype.

5. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to set aside all previous fixations of type species for the nominal genus *Nygolaimus* Cobb, 1913 and to designate *Dorylaimus brachyuris* de Man, 1880 as the type species;

(2) to place on the Official List of Generic Names in Zoology the name *Nygolaimus* Cobb, 1913 (gender: masculine), type species *Dorylaimus brachyuris* de Man, 1880 by the designation in (1) above;

(3) to place on the Official List of Specific Names in Zoology the name *brachyuris* de Man, 1880, as published in the binomen *Dorylaimus brachyuris* and as defined by the lectotype designated by Loof (1961) (specific name of the type species of *Nygolaimus* Cobb, 1913).

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## Case 2937

# *Cacoxenus indagator* Loew, 1858 (Insecta, Diptera): proposed conservation of the generic and specific names

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**Abstract.** The purpose of this application is to conserve the generic and specific names of *Cacoxenus indagator* Loew, 1858, a widespread European fly belonging to the DROSOPHILIDAE which is a symbiont of bees of the genus *Osmia* Panzer, 1806. The larvae of some *Cacoxenus* species are predators of coccids and pseudococcids. The original specimens of *Domomyza cincta* Rondani, 1856 are actually specimens of *C. indagator*, but since its establishment *Domomyza* has been placed in the AGROMYZIDAE (usually as a synonym of *Agromyza* Fallén, 1810) and neither it nor the specific name of *D. cincta* have had usage for drosophilids. It is proposed that Rondani's slightly earlier names *Domomyza* and *cincta* be suppressed to conserve *Cacoxenus* and *indagator*.

**Keywords.** Nomenclature; taxonomy; Diptera; AGROMYZIDAE; DROSOPHILIDAE; *Cacoxenus*; *Domomyza*.

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1. The nominal genus *Domomyza* was established by Rondani (1856, p. 121) in a combined key description of the genus and the new species *D. cincta*; he placed it in the family AGROMYZIDAE. Although under the modern Codes *D. cincta* is by monotypy the type species of *Domomyza*, in 1875 Rondani himself stated (p. 168) that *Agromyza nigripes* Meigen, 1830 was the type; he gave a description of *D. cincta* on p. 175.

2. *Domomyza* has been placed in the AGROMYZIDAE ever since Rondani's time; it has usually been regarded as a synonym of *Agromyza* Fallén, 1810 (for example by Hendel, 1927, p. 249), and as such it has been very little used. Papp (1984, p. 341) treated *Domomyza* as a nomen dubium and stated that *D. cincta* was an unrecognizable species.

3. Loew (1858, p. 217) described the nominal genus *Cacoxenus*, containing only the new species *C. indagator* (p. 218); this is therefore the type by monotypy.

4. The name *C. indagator* has been used in at least 55 papers (of which seven mention it in the titles); the species, which parasitises bees of the genus *Osmia* Panzer, 1806, is widely distributed in Europe and has been studied in the fields of ecology, morphology, embryology and behaviour (e.g. Osten Sacken, 1892; de Meijere, 1944; Juillard, 1947, 1948; Ashburner, 1981; Olifir, 1990). It appears in the keys to the DROSOPHILIDAE of various regions (for example Duda, 1924, pp. 178 and 225; Kloet & Hincks, 1945, p. 400; Fonseca, 1965, p. 243; Stackelberg, 1970, p. 392).

5. Deeming (1988) studied seven original Rondani specimens of *Domomyza cincta* and found that they are not agromyzids but are specimens of the drosophilid

*Cacoxenus indagator*; he reported that K.A. Spencer had selected a male lectotype for *D. cincta* from 'Emilia et Etruria', Italy. Spencer & Martinez (1987, p. 267) noted Deeming's finding, then in press, and in their corrections to Papp's (1984) catalogue removed *D. cincta* from the AGROMYZIDAE.

6. Apart from two recent instances by myself (Sidorenko, 1990a, p. 216; 1990b, p. 129) the generic name *Domomyza* has never been used in the DROSOPHILIDAE; the specific name of *D. cincta* has never been used for a drosophilid (nor even in the AGROMYZIDAE for very many years). I now believe that the replacement of *Cacoxenus* by *Domomyza* and of *C. indagator* by *D. cincta* would cause confusion and serve no purpose, and there is a prima facie case for suppression of the earlier generic and specific synonyms.

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the following names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
  (a) the generic name *Domomyza* Rondani, 1856;
  (b) the specific name *cincta* Rondani, 1856, as published in the binomen *Domomyza cincta*;

(2) to place on the Official List of Generic Names in Zoology the name *Cacoxenus* Loew, 1858 (gender: masculine), type species by monotypy *Cacoxenus indagator* Loew, 1858;

(3) to place on the Official List of Specific Names in Zoology the name *indagator* Loew, 1858, as published in the binomen *Cacoxenus indagator* (specific name of the type species of *Cacoxenus* Loew, 1858);

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Domomyza* Rondani, 1856, as suppressed in (1)(a) above;

(5) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *cincta* Rondani, 1856, as published in the binomen *Domomyza cincta* and as suppressed in (1)(b) above.

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## Case 2998

# *Australopithecus afarensis* Johanson, 1978 (Mammalia, Primates): proposed conservation of the specific name

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**Abstract.** The purpose of this application is to conserve the specific name of *Australopithecus afarensis* Johanson, 1978 for an East African fossil primate (tribe HOMININI). The name is a junior subjective synonym of the specific name of *Meganthropus africanus* Weinert, 1950 and has been used in place of the latter, which is a junior secondary homonym of the South African hominin name *Australopithecus africanus* Dart, 1925. It is proposed that the usage of *afarensis* be maintained whatever the generic association.

**Keywords.** Nomenclature; taxonomy; Primates; hominids; Pliocene; *Australopithecus afarensis*; East Africa.

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1. Dart (1925, p. 198, figs. 1–6) described and illustrated a fossil (presumed Pliocene) hominin skull from Taung, South Africa, and gave it the new generic and specific names *Australopithecus africanus*.

2. In 1939 excavations at the Pliocene site of Garusi in Tanganyika Territory (now Tanzania) yielded a hominin maxillary fragment with two premolar teeth. The specimen was referred to as '*Praeanthropus*' by Hennig (1948, p. 214) but, since Hennig's publication did not include the fixation of a type species, the name is not available from this work (Article 13b of the Code; see para. 3 below). The first available name for the specimen is *Meganthropus africanus* Weinert, 1950 (p. 139, pl. 14, fig. 2). Because of its large size, Weinert compared the fossil with Recent humans and with fossil remains from Java and did not mention *Australopithecus*. He described it as a new species of the Javanese Pleistocene genus *Meganthropus* Weidenreich, 1944.

3. Remane (1951, 1954) further described the Garusi maxilla and compared it with other nominal genera, including *Plesianthropus* Broom, 1938 and *Paranthropus* Broom, 1938 from South Africa, but maintained Weinert's name *Meganthropus africanus*. A further study of the specimen was made by Robinson (1954), who concluded that it was conspecific with *Australopithecus africanus* Dart, 1925. Von Koenigswald (1954, p. 85) recorded: 'We agree with Robinson that *Meganthropus africanus*, collected by Kohl-Larsen in East Africa, has nothing to do with our Javanese form and rather belongs to the Australopithecinae'. He also noted: 'The view that the specimen in question might belong to an Australopithecinae has already been expressed earlier: first by W. Abel (vide: L. Kohl-Larsen, 1943), later by Teilhard de Chardin (1952, p. 377, footnote) and the present author (von Koenigswald, 1953, p. 132)'. Senyürek (1955, p. 33), in contrast to Robinson (1954),

not only recognised the specimen as a distinct australopithecine but transferred it to a new genus as *Praeanthropus africanus* (Weinert, 1950).

4. Further hominin material was discovered during the 1970s at the Garusi site, by now known as Laetoli (the original Garusi maxilla being numbered L.H.1, 'L.H.' meaning Laetoli Hominid). On the basis of this new material, together with specimens from the Hadar site in Ethiopia, Johanson, White & Coppens (1978 [after August], pp. 2–9, pls. 2–4) diagnosed and illustrated a new species, *Australopithecus afarensis*. The name itself was made available a few months earlier in a report of a scientific meeting, and the correct citation (Article 50b of the Code) is therefore *Australopithecus afarensis* Johanson, 1978 (June; p. 571). The type specimen of *Australopithecus afarensis* (stated by Johanson, White & Coppens, 1978 to be the holotype but in fact the lectotype; Article 74b) is a nearly complete mandible numbered L.H.4, collected from Laetoli in 1974 and housed in the National Museums of Kenya, Nairobi. The authors noted: 'Laetoli Hominid-4 was selected as the holotype [recte lectotype] both because of its distinctive, diagnostic morphology and because it has previously been fully described and illustrated (White, 1977)'. Johanson et al. (1978) included the Garusi maxilla L.H.1 as a 'paratype' (recte paralectotype) of the new nominal species *A. afarensis*.

5. Subsequent commentators have been virtually unanimous in concluding that the Laetoli and Hadar hominins, whether they form a single species or not, are not conspecific with *Australopithecus africanus* Dart, 1925 (see, for example, Wood & Chamberlain, 1986, and Groves, 1989). Day, Leakey & Olson (1980, p. 1102) noted: 'Inclusion [by Johanson et al., 1978] of the Garusi 1 specimen in the type-series of *A. afarensis* and their listing of *M*[*eganthropus*] *africanus* as a synonym of this name has the effect of making *A. afarensis* a replacement name (junior subjective synonym) for Weinert's *M. africanus*. Johanson was correct in giving a new name to Weinert's species because his inclusion of this species in the genus *Australopithecus* Dart, 1925 meant that the nominal species *Australopithecus africanus* (Weinert, 1950) had to be rejected since it was now a junior secondary homonym of *Australopithecus africanus* Dart, 1925'. They also noted: 'The name *afarensis* is valid as a substitute for Weinert's prior name only (i) when Weinert's holotype and the L.H.4 lectotype are included in the same species and (ii) when this species is classified in a genus in which Weinert's name is a junior homonym' (Article 59d). The consequences of the latter were spelt out by Olson (1981, p. 118), who transferred the Laetoli and part of the Hadar material to the genus *Paranthropus* and noted: 'The removal of this species from the genus *Australopithecus* necessitates the restoration of Weinert's (1950) original nomen, *Meganthropus africanus*, as the valid species-group name for this taxon and it means that its junior subjective synonym, *Australopithecus afarensis*, must be rejected (Day et al. 1980). In this present study *Paranthropus africanus* (Weinert, 1950) is adopted as the valid name of this taxon'.

6. The specific name *afarensis* Johanson, 1978 is now well entrenched in the literature and has appeared in representative publications such as Howell (1978), Wolpoff (1980), Rak (1983), Leakey (1987), Fleagle (1988), Klein (1989), Allan (1992) and Feder & Park (1993), and several papers in each of the following compilations: Delson (Ed., 1985), Giacobini (Ed., 1989) and Jones, Martin & Pilbeam (Eds., 1992). The senior subjective synonym *africanus* Weinert, 1950 has been little used and its resurrection would cause considerable confusion with Dart's

(1925) name *Australopithecus africanus*, which is much in current use. In some cases (see Groves, 1989) it is only the necessity of losing the well-known name *afarensis* in favour of *africanus* Weinert that has prevented the taxonomic removal of *afarensis* from the genus *Australopithecus*. This unfortunate circumstance is certainly against the spirit of the Code, which refers in its Introduction (p. xiii) to 'the freedom of scientists to classify animals according to taxonomic judgements'. To allow the uninterrupted use of the specific name *afarensis* Johanson, 1978 I propose that the name be conserved by the suppression of *africanus* Weinert, 1950.

7. To my knowledge *Praeanthropus* Senyürek, 1955, of which *Meganthropus africanus* Weinert, 1950 is the nominal type species (see para. 3 above), has not been used as valid since its publication. It is available if *afarensis* is removed from *Australopithecus* and placed in another genus, and it is likely that the name *Praeanthropus* will be needed in the future.

8. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the specific name *africanus* Weinert, 1950, as published in the binomen *Meganthropus africanus*, for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;

(2) to place on the Official List of Generic Names In Zoology the name *Praeanthropus* Senyürek, 1955 (gender: masculine), type species by monotypy *Meganthropus africanus* Weinert, 1950 (a suppressed senior subjective synonym of *Australopithecus afarensis* Johanson, 1978);

(3) to place on the Official List of Specific Names in Zoology the name *afarensis* Johanson, 1978, as published in the binomen *Australopithecus afarensis* (first available subjective synonym of *Meganthropus africanus* Weinert, 1950, the type species of *Praeanthropus* Senyürek, 1955);

(4) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *africanus* Weinert, 1950, as suppressed in (1) above.

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## Case 3010

# Proposed conservation of usage of 15 mammal specific names based on wild species which are antedated by or contemporary with those based on domestic animals

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**Abstract.** The purpose of this application is to conserve the usage of 15 specific names for mammals which are distinct from those of their domestic derivatives and which postdate or are contemporary with the latter. A number of systems have been devised for the naming of domestic animals but none has gained universal acceptance. Many taxa first described and named by Linnaeus (1758, 1766) and other authors were either based on domestic animals or encompassed both the wild and domestic forms. The majority of domestic animals and their wild ancestors continue to share the same name but in a few cases a tradition has arisen under which the domestic and wild forms are separately named. Among these are 15 mammals in which the name for the domestic form antedates or is contemporary with that of the wild ancestor and this name has been applied by a minority of authors to the wild species, creating confusion in the literature. It is proposed that majority usage be confirmed by adoption of the first available specific name based on a wild population for the following wild taxa: *Equus africanus* Heuglin & Fitzinger, 1866 (ass), *E. ferus* Boddaert, 1785 (tarpan), *Camelus ferus* Przewalski, 1883 (Bactrian camel), *Camelus* (currently *Lama*) *guanicoe* Müller, [1776] (guanaco), *Camelus* (currently *Vicugna*) *vicugna* Molina, 1782 (vicuña), *Bos primigenius* Bojanus, 1827 (aurochs), *B. gaurus* H. Smith, 1827 (gaur), *B.* (currently *Bubalus*) *arnee* Kerr, 1792 (water buffalo), *Poephagus* (currently *Bos*) *mutus* Przewalski, 1883 (yak), *Capra aegagrus* Erxleben, 1777 (bezoar), *Ovis orientalis* Gmelin, 1774 (Asian mouflon), *Cavia aperea* Erxleben 1777 (guinea pig), *Canis lupus* Linnaeus, 1758 (wolf) *Mustela putorius* Linnaeus, 1758 (polecat) and *Felis silvestris* Schreber, [1777] (wildcat).

**Keywords.** Nomenclature; taxonomy; Mammalia; *Equus africanus*; *Equus ferus*; *Camelus ferus*; *Lama guanicoe*; *Vicugna vicugna*; *Bos primigenius*; *Bos gaurus*; *Bubalus arnee*; *Bos mutus*; *Capra aegagrus*; *Ovis orientalis*; *Cavia aperea*; *Canis lupus*; *Mustela putorius*; *Felis silvestris*; domestic animal names.

1. The first evidence for the domestication of a wild animal, that of the wolf, is dated between 12000 and 14000 years ago, and the earliest known domestic food animals were goats around 9000 years ago. There is little, if any, evidence that the cultivation of plants began earlier than 7000–8000 years ago, after the end of the last glacial period (see Hillman, Colledge & Harris, 1989, p. 265). Mason (1984, p. vii) considered that a domestic animal, in its most developed form, shows four main characteristics: (1) its breeding is under human control; (2) it provides a product or service useful to man; (3) it is tame; (4) it has been selected away from the wild type. The concept of domestication was further defined by Gautier (1990): 'It is a microevolutionary process and a form of cultural control over animals, implying that these creatures are forced to live and multiply in captivity; as a result they acquire domestic traits' (see also various papers in Clutton-Brock, Ed., 1989). Not all animals considered to be 'domestic' qualify under all the criteria, and archaeologists and anthropologists have demonstrated many different stages intermediate between wild species and their domestic derivatives (see, for example, Wing, 1993 and references cited in her paper). Van Gelder (1969, p. 151) also drew a distinction between modern 'domestic' animals (populations that differ from their ancestral stocks through selection by man) and 'domesticates' (individuals that are tame and 'of the home'). The ultimate distinguishing feature of a domestic animal is the presence of a range of genotypes produced by artificial selection. It is now generally accepted that most domestic animals are monophyletic stocks, each with a single wild ancestor. Some animals which have been domesticated for a long time remain very similar to the wild type (the rabbit, Bali cattle and the water buffalo, for example) and all domestic forms retain the genetic ability to breed with the wild species if that is extant (see, for example, Stains, 1975 for dog/wolf; Novoa & Wheeler, 1984 for llama and alpaca/guanaco and Morris, 1993 for ferret/polecat and domestic cat/wildcat).

2. Domestic animals do not fall into a recognised and consistent system of taxonomy (see Clutton-Brock, 1987; Gautier, 1993; and Groves, 1995) and zoologists and archaeozoologists have been discussing their naming for many years. Many taxa first described and named by Linnaeus (1758, 1766) and a few other authors were either based on domestic animals or encompassed both the wild species and domestic forms. The great majority of wild species and their domestic derivatives share the same name (e.g. *Oryctolagus cuniculus* (Linnaeus, 1758) for the wild and the domestic rabbit, *Myocastor coypus* Molina, 1782 for the wild coypu and the domestic nutria, *Anas platyrhynchos* Linnaeus, 1758 for the mallard and the domestic duck, and *Columba livia* Gmelin, 1789 for the rock dove and the domestic pigeon; see Corbet & Clutton-Brock, 1984 and Clutton-Brock, 1987), but some 18 domestic forms have names which are traditionally distinct from those applied to their wild ancestors (see Groves, 1995; those for mammals are set out in the Table, p. 34). Of these, 15 domestic mammals have names which antedate or are contemporary with those for the wild species and a few authors have applied these names to the wild species. This has caused problems and confusion in zoology and especially in archaeozoology where the distinction between wild species, domestic forms and intermediate stages is crucial.

3. The creation of Latin names for domestic animals was fashionable for many decades in the 19th and early 20th centuries and a plethora of names in the literature resulted. The nomenclatural treatment of these names (as species, subspecies, races or

breeds) was inconsistent, both between authors and within the works of the same author. Ellerman & Morrison-Scott (1951), for example, treated the wild and domestic forms of the gaur as separate species, *Bos gaurus* and *B. frontalis*; the wild yak as a subspecies, *B. grunniens mutus*, of the domestic; and the wild and domestic forms of the water buffalo as conspecific, *Bubalus bubalis*. More recently, attempts have been made to achieve consistency in the naming of domestic animals and a number of nomenclatural systems have been devised. These were summarised and discussed by Gautier (1993); the most notable are mentioned here. Bohlken (1958, 1961) proposed that priority should be suspended for the nomenclature of domestic animals; he labelled them with the specific name of the wild ancestor followed by the name of the domestic form where this had been separately named. In order to indicate that domestic animals were not 'natural' subspecies he added the word 'forma' and treated the trinominal as infrasubspecific (e.g. '*Bos primigenius* forma taurus'). This system was adopted by Herre & Röhrs (1990) and various European authors, including Zeuner (1963). Dennler de la Tour (1959, 1968) also considered that priority should not apply to the names of domestic animals and proposed that they be labelled with the name of the wild ancestor followed by 'familiaris' to denote their status (e.g. *Bos primigenius* 'familiaris').

4. In response to the inconsistency of treatment in the two systems by then proposed to deal with the naming of domestic animals (para. 3 above), neither of which was in accord with the Code, and the danger of a proliferation of such systems, one of us (C.P.G.) submitted an application to the Commission (BZN **27**: 269–272; March 1971) which sought to exclude from the Code names based on domestic animals. Groves proposed that wild species should be referred to by the first available name based on a wild population, whilst vernacular names only would be used for domestic animals (e.g. '*Bos* (domestic cattle)'). Comments on the application were received from eight authors; those from five were published (BZN **28**: 77–78, 140 (1971); **29**: 108 (1972); **36**: 5–10 (1979)). All the commentators opposed the proposal on practical grounds: (a) there are difficulties in interpreting the meaning and boundaries of the word 'domestic' (see para. 1 above) and it would be difficult to decide which names were to be treated as outside the scope of zoological nomenclature; (b) as noted above (para. 2), relatively few names based on domestic forms are distinct from those applicable to their wild ancestors. The majority of wild species and their domestic derivatives share the same name, which may well have been based on domestic forms. If 'domestic' names were excluded from nomenclature under the Code all these names would be affected. Additionally, if excluded from the Code, the 'domestic' names could, formally, be re-used for different taxa, leading to considerable confusion. The application eventually lapsed. Nearly all the commentators, and also Richard Melville (former Secretary to the Commission) in his summing-up (BZN **34**: 139–140; November 1977), advocated bringing an application to the Commission to deal individually with the names for wild species which are distinct from and are contemporary with or postdate those for domestic animals. There has been no application until now.

5. The inconsistent treatment of the names for domestic animals has continued until the present day. Following Groves's (1971) application a number of authors (Clutton-Brock, Corbet & Hills, 1976; Corbet, 1978; Cockerill, 1984) urged that names for domestic forms should be vernacular only. Odening (1979), however,

treating domestic animals and their wild ancestors as conspecific, proposed that the earliest available name for the two components should be adopted, domestic animals being indicated by the notation 'hemerotype' and wild species by 'agriotype' (e.g. '*Felis catus*' would denote both wild and domestic cats, '*F. catus* agriot.' all wildcats, and '*F. catus* hemerot.' all domestic cats). Where the ancestor of the domestic form was not known separate names would be used for the wild species and domestic form. Corbet & Clutton-Brock (1984) recommended that Linnaean names be used for domestic animals as if separate from the wild species but in quotation marks to indicate their status (e.g. *Canis* '*familiaris*'). Clutton-Brock (1987) subsequently used names based on domestic animals as valid for domestic forms, and applied the first available names based on wild species to the wild taxa. Gautier (1993) proposed that domestic animals be treated as subspecies of wild species and named accordingly, whilst in the same volume Uerpmann (1993) proposed that domestic animals should be denoted by a single Latin word printed in capitals and italics (e.g. *ALPACA*, *BOS*, *BANTENG*, *CABALLUS*, *LAMA*).

6. In his compilation of mammalian genera and families Palmer (1904) recorded the type species designations made by earlier authors. In a number of cases the types are domestic animals. The generic names *Bos* and *Ovis* were placed on the Official List in Opinion 75 (January 1922), *Canis*, *Capra* and *Felis* in Opinion 91 (October 1926). The type species of these genera (*Bos taurus*, *Ovis aries*, *Canis familiaris*, *Capra hircus* and *Felis catus* respectively, in accord with Palmer's 1904 citations) were placed on the Official List in Direction 22 (November 1955). The specific name of *Mustela putorius* (type species of *Putorius* Cuvier, [1816], placed on the Official List in Opinion 91) was also placed on the Official List in Direction 22. *Equus* and its type species, *E. caballus*, were placed on Official Lists in Opinion 271 (September 1954). The specific names of *Felis silvestris* and *Bos gaurus* were placed on the Official List in Opinions 465 (May 1957) and 1348 (September 1985) respectively. Palmer (1904), following the designation of Hay (1902), cited *Camelus dromedarius* Linnaeus, 1758, the domestic Arabian camel, as the type species of *Camelus*. A misleading statement in Opinion 16 (July 1910) has resulted in subsequent authors (see, for example, Allen, 1939 and Ellerman & Morrison-Scott, 1951) citing *bactrianus* as the type, disregarding Hay's designation. Both *dromedarius* and *bactrianus* are currently included in *Camelus*; none of the names *Camelus*, *dromedarius* or *bactrianus* has been placed on an Official List.

7. Notwithstanding the continuing discussions on what should be the approved nomenclature of domestic animals (paras. 2–5 above), for those with distinct names the naming of their wild ancestors has been relatively stable in recent years. Most authors have adopted the first available name based on the wild species as valid for the taxon (see the Table, p. 34). The names have appeared in current checklists and reference works (see, for example, Corbet, 1978; Corbet & Hill, 1991, 1992; Nowak, 1991, some names) and numerous publications on biology, ecology, behaviour and conservation, as well as taxonomy. Recent representative works in which the names have been used include Groves (1974, 1986), Kingdon (1979, 1982), Stuart (1982), Martin & Klein (1984), Uerpmann (1987), Skinner & Smithers (1990), Harrison & Bates (1991), Morey (1994) and Wheeler (1995). The first available name based on the wild species has also been adopted for endangered taxa in the (1993) *1994 IUCN Red List of Threatened Animals*, and in legal documentation relating to the conservation

and management of protected species (see, for example, CITES Appendices I–III (Convention on International Trade in Endangered Species of Wild Fauna and Flora)).

8. The new (1993) edition of *Mammal species of the world*, edited by Wilson & Reeder, is an exception to majority usage. In the chapters on the Perissodactyla and the Artiodactyla names have been used for wild species irrespective of whether they were first described on a wild or a domestic form. Thus the Linnaean names *Equus asinus* and *E. caballus* are used for both the wild and domestic forms of ass and horse respectively, and *Bos taurus* is used for the aurochs, with *B. primigenius* Bojanus, 1827 included as a synonym. Similarly, *Ovis aries* and *Capra hircus* are given as the valid names for the wild progenitors of sheep and goats, which usually appear as *Ovis orientalis* Gmelin, 1774 and *Capra aegagrus* Erxleben, 1777 in archaeozoological publications and current checklists (such as Corbet & Hill, 1991). Editorial policy was to adopt the earliest name (see the Introduction, p. 9) but this has not been used for taxa in other chapters of the volume where, for example, the Linnaean name for the domestic cat, *Felis catus*, is cited as a synonym of *F. silvestris* Schreber, [1777], the wild cat, and the Linnaean name *Cavia porcellus* is restricted to the domestic form of the guinea pig. The use for wild species of names that were first described on domestic forms is a retrograde step that will confuse not only biologists, palaeontologists, archaeologists and those in applied fields (ecology, conservation, behaviour studies and physiological research) but also customs officials who have the job of sorting out illegal imports of endangered species. They would find it difficult to impound a trophy head of a wild sheep if it carries the name of *Ovis aries*. In their review of the Wilson & Reeder volume Corbet & Hill (1994) criticised both the unaccustomed inclusion for these taxa of the domestic form and the wild species under the same name and the inconsistency of treatment in different groups. They noted: 'The ambiguities ... could easily be avoided by excluding the domestic forms from the wild species'.

9. In accord with the great majority of usage for the 15 mammal taxa listed in the Table (p. 34), we now propose that the usage for wild taxa of the first available names based on wild species should be conserved. Our proposal was discussed and endorsed by the Executive Committee of the International Council of Archaeozoology at a meeting (July 1995) in Cambridge, U.K., and by a meeting (September 1995) of the ICAZ in Basle.

10. Two non-mammalian taxa, *Cyprinus* (currently *Carassius*) *gibelio* Bloch, 1782, the Prussian or gibel carp widely spread from Central Europe to East Asia, and *Theophila* (currently *Bombyx*) *mandarina* Moore, 1872, the mulberry silk moth from China, Korea and Japan, traditionally have distinct names which postdate those of the derived domestic forms, *Carassius auratus* (Linnaeus, 1758), the goldfish, and *Bombyx mori* (Linnaeus, 1758), the silkworm. To our knowledge there is no confusion in the use of these names and we have therefore not proposed Commission action to protect the name of the wild species. Aquarist publications such as Axelrod & Vorderwinkler (1976, p. 163) have used *Carassius auratus* for the ornamental fish; Sterba (Ed., 1983, p. 117) used *C.a. auratus* and *C.a. gibelio* for the aquarium fish and wild species respectively. Chinery (1973, pp. 166, 191) used the name *Bombyx mori* for the domestic silkworm; Tazima (1984, p. 417) used *B. mandarina* for the wild species of mulberry silk moth and *B. mori* for the domestic form. *Phalaena mori*

Linnaeus, 1758 was designated the type species of *Bombyx* Linnaeus, 1758 and placed on the Official List in Opinion 450 (March 1957).

11. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to rule that the name for each of the wild species listed in (2) and (3) below is not invalid by virtue of being antedated by a name based on a domestic form;

(2) to place on the Official List of Specific Names in Zoology the following names, together with an endorsement to record the ruling in (1) above:
   (a) *africanus* Heuglin & Fitzinger, 1866, as published in the binomen *Equus africanus*;
   (b) *ferus* Boddaert, 1785, as published in the binomen *Equus ferus*;
   (c) *ferus* Przewalski, 1883, as published in the trinomen *Camelus bactrianus ferus*;
   (d) *guanicoe* Müller, [1776], as published in the binomen *Camelus guanicoe*;
   (e) *vicugna* Molina, 1782, as published in the binomen *Camelus vicugna*;
   (f) *primigenius* Bojanus, 1827, as published in the binomen *Bos primigenius*;
   (g) *arnee* Kerr, 1792, as published in the binomen *Bos arnee*;
   (h) *mutus* Przewalski, 1883, as published in the binomen *Poephagus mutus*;
   (i) *aegagrus* Erxleben, 1777, as published in the binomen *Capra aegagrus*;
   (j) *orientalis* Gmelin, 1774, as published in the binomen *Ovis orientalis*;
   (k) *aperea* Erxleben, 1777, as published in the binomen *Cavia aperea*;
   (l) *lupus* Linnaeus, 1758, as published in the binomen *Canis lupus*;

(3) to add to the entries for the following specific names on the Official List of Specific Names in Zoology an endorsement to record the ruling in (1) above:
   (a) *gaurus* H. Smith, 1827, as published in the binomen *Bos gaurus*;
   (b) *putorius* Linnaeus, 1758, as published in the binomen *Mustela putorius*;
   (c) *silvestris* Schreber, [1777], as published in the trinomen *Felis catus silvestris*.

**Table. Mammal wild species and their domestic derivatives which traditionally have separate names**

| Wild species | Domestic form |
|---|---|
| **Perrisodactyla** | |
| *Equus africanus* Heuglin & Fitzinger, 1866 (p. 588)<br>North African wild ass | *Equus asinus* Linnaeus, 1758 (p. 73)<br>Donkey |
| *Equus ferus* Boddaert, 1785 (p. 159)<br>Russian wild horse, tarpan | *Equus caballus* Linnaeus, 1758 (p. 73)<br>Domestic horse |
| **Artiodactyla** | |
| *Camelus bactrianus ferus* Przewalski, 1883 (p. 43, pl. opposite p. 42)<br>Wild Bactrian camel, now restricted to the western Gobi desert | *Camelus bactrianus* Linnaeus, 1758 (p. 65)<br>Domestic Bactrian camel |
| *Camelus guanicoe* Müller, [1776] (p. 50)<br>South American guanaco | *Camelus glama* Linnaeus, 1758 (p. 65)<br>Llama |
| [1]*Camelus vicugna* Molina, 1782 (p. 313)<br>South American vicuña | *Camelus pacos* Linnaeus, 1758 (p. 66)<br>Alpaca |
| *Bos primigenius* Bojanus, 1827 (p. 477, pl. 24)<br>Aurochs of Europe, Asia and North Africa, extinct since 1627 | *Bos taurus* Linnaeus, 1758 (p. 71) (including *B. indicus* Linnaeus, 1758, p. 72)<br>Common cattle (including zebu) |
| *Bos gaurus* H. Smith, 1827 (p. 399)<br>Gaur of India, Burma and Malaya | *Bos frontalis* Lambert, 1804 (p. 57)<br>Gaur, mithan |
| *Bos arnee* Kerr, 1792 (p. 336, figs. opposite pp. 295, 336)<br>Indian water buffalo, arni | *Bos bubalis* Linnaeus, 1758 (p. 72)<br>Domestic water buffalo |
| *Poephagus mutus* Przewalski, 1883 (p. 191, pl. opposite p. 190)<br>Asian yak | *Bos grunniens* Linnaeus, 1766 (p. 99)<br>Domestic yak |
| *Capra aegagrus* Erxleben, 1777 (p. 260)<br>Bezoar of the Middle East | *Capra hircus* Linnaeus, 1758 (p. 68)<br>Domestic goat |
| *Ovis orientalis* Gmelin, 1774 (pp. 432, 486, pl. 15)<br>Mouflon of Western Asia | *Ovis aries* Linnaeus, 1758 (p. 70)<br>Domestic sheep (including European mouflon; see Uerpmann, 1981) |
| [2]*Sus scrofa* Linnaeus, 1758 (p. 49)<br>Eurasian wild boar | *Sus domesticus* Erxleben, 1777 (p. 179)<br>Domestic pig |
| **Rodentia** | |
| *Cavia aperea* Erxleben, 1777 (p. 348)<br>South American cavy | *Mus porcellus* Linnaeus, 1758 (p. 59)<br>Domestic guinea pig |
| **Carnivora** | |
| *Canis lupus* Linnaeus, 1758 (p. 39)<br>Wolf of the Palaearctic, India and North America | *Canis familiaris* Linnaeus, 1758 (p. 38)<br>Dog (including dingo) |
| *Mustela putorius* Linnaeus, 1758 (p. 46)<br>Polecat of Europe, Middle East and Morocco | *Mustelo furo* Linnaeus, 1758 (p. 46)<br>Ferret |
| *Felis catus silvestris* Schreber, [1777], (p. 39)<br>Wildcat of Western Europe to Western China and Central India, much of Africa | *Felis catus* Linnaeus, 1758 (p. 42)<br>Domestic cat |

[1]There is some archaeological evidence that the domestic alpaca *Camelus pacos* Linnaeus, 1758 has been derived from the wild South American vicuña *Camelus vicugna* Molina, 1782 (see Wheeler, 1995). However, comparison of living domestic animals with the wild species has led other researchers to different conclusions. Whatever the final outcome on the ancestry of the alpaca we propose that the usage of the specific name *vicugna* be conserved for the vicuña.

[2]The name *Sus scrofa* Linnaeus, 1758 for the wild boar predates that for the domestic form, *S. domesticus* Erxleben, 1777, and Commission action is therefore not required to secure the name. *Sus* was placed on the Official List in Opinion 75, and the type species *S. scrofa* in Direction 22.

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## Case 2962

## D.L.G. Karsten (1789), *Museum Leskeanum*, vol. 1 (Regnum Animale): proposed suppression for nomenclatural purposes

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**Abstract.** The purpose of this application is to propose the suppression of D.L.G. Karsten's *Museum Leskeanum* (1789) for nomenclatural purposes on the grounds that the availability of his new molluscan names would disturb the stability of nomenclature and that the work is not consistently binominal. Only one of Karsten's molluscan names had been used until Duchamps & Tursch (1994) claimed that *Museum Leskeanum* was an available work on the grounds that it was no less binominal than Röding's *Museum Boltenianum* (1798), which was placed on the Official List in Opinion 26 (1926). Tursch, Duchamps & Greifeneder (1994) have replaced two well-known molluscan names with Karsten names. Other names by authors such as Gmelin (1791) and Röding (1798) are threatened with displacement as junior synonyms or homonyms.

**Keywords.** Nomenclature; taxonomy; D.L.G. Karsten; *Museum Leskeanum* (1789); Mollusca.

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1. *Museum Leskeanum* (1789) by Dietrich Ludwig Gustav Karsten (1768–1810) is a two volume work describing the collections of Nathanael Gottfried Leske (1751 1786). The first volume covers zoology, the second mineralogy. The zoological part, 'Regnum Animale', contains six sections entitled Mammalia, Aves, Amphibia, Pisces, Insecta, and Vermes. New names are introduced for birds, insects, mollusks, and barnacles; most new taxa are illustrated on eight colored plates (two for birds, three for insects and three for mollusks). The section on insects was authored by J.J. Zschach and was published separately the previous year (1788); the other sections were written by Karsten. Leske's mineral collection was purchased by the Royal Dublin Society in 1798 (Cleevely, 1982), but the fate of his shell collection is not known — it was not treated by Dance (1986) in the standard reference on the location of mollusk collections.

2. Zschach's 136-page section on insects is clearly non-binominal, with no distinction between names and descriptions of the new taxa; it has been rightly ignored by entomologists. However, the availability of names in the sections written by Karsten should not be influenced by the non-binominal nature of Zschach's section. Sherborn (1902) did not note Karsten's work as non-binominal, and listed those of his new names for birds and mollusks that were accompanied by illustrations (except *Conus aulicus* var. *singularis*; see para. 7).

3. Karsten's section on birds is binominal, but his three new bird names, *Certhia longicauda* (p. xvi), *Pipra tricolor* (p. xxiii), and *Trochilus maximus* (p. xvii), although

accompanied by illustrations, have been ignored by ornithologists. None of these specific names is in current use and I have found none in 19th and 20th century synonymies that I have examined; they are not mentioned in Peters (1931–1987). Ornithologists I have consulted are unable to identify the illustrations to species level. Thus, the availability of Karsten's portion of *Museum Leskeanum* should be determined by a consideration of the 'Vermes' section, which includes new names for a number of mollusks and two barnacle species.

4. For most molluscan species, Karsten gave bibliographic references to earlier works, primarily Linnaeus (1767), Born (1780) and Martini & Chemnitz (1769–1788). Martini & Chemnitz's work, *Neues Systematisches Conchylien-Cabinet*, was rejected by the Commission on the grounds that the authors had not consistently applied the principles of binominal nomenclature (Opinion 184, 1944; Direction 1, 1954). When Karsten cited species from Linnaeus (1767) and Born (1780) he used those authors' binominal names. When he cited species from Martini & Chemnitz (1769–1788) he in some cases failed to make the names binominal. The great majority of the names in the 'Vermes' section are binominal, and many others that at first glance appear to be non-binominal can be interpreted as being binominal. There are a few names, however, that cannot be interpreted in this way, for example, *Pinna haud ignobilis* and *Trochus leviter muricatus*. Because of such inconsistencies, Karsten's names for mollusks have generally been dismissed by malacologists as being non-binominal. For example, Vokes (1971, p. 114) noted that *Murex varicosus* Karsten was unavailable since it was proposed in a non-binominal work. In the copy of *Museum Leskeanum* at the Academy of Natural Sciences of Philadelphia, a former curator of malacology penciled 'Non-binomial — R.T. Abbott 1962' on the first page. Until 1994, only a single Karsten name for a mollusk had been used as valid by malacologists: *Nerita reticulata* (p. 296), for example by Pilsbry (1888, p. 21); however, this taxon is now known as *Nerita signata* Lamarck, 1822.

5. Duchamps & Tursch (1994) have argued that Karsten's *Museum Leskeanum* (1789) should be considered binominal. They claimed that its few departures from binominal nomenclature are no more severe than those in Röding's *Museum Boltenianum* (1798), which was accepted by the Commission as available (Opinion 96, 1926) and placed on the Official List (Direction 48, 1956). This comparison is unsound since the availability of Röding's work was doubted not because of questions of adherence to binominal nomenclature but because many workers refused to accept a sales catalogue of limited distribution as a valid nomenclatural work (see Rehder, 1945). All apparently trinominal names in *Museum Boltenianum* either include a name subspecific in intent or have a compound word as the specific name (Rosenberg, 1994). Röding's work therefore is entirely consistent with binominal nomenclature. Although Duchamps & Tursch (1994) picked a poor example, the principle of their argument has some merit, for some early works on mollusks are accepted despite minor departures from binominal nomenclature. For example da Costa (1778) has three two-word genera, *Buccina Canaliculata* (p. 120), *Buccina Recurvirostra* (p. 130), and *Buccina Longirostra* (p. 133); species named in these genera have been treated as if named in *Buccinum* Linnaeus, 1758.

6. A more fundamental problem than the few non-binominal names in *Museum Leskeanum* is the serious disruptions to nomenclature that would result from considering it to be available. Duchamps & Tursch (1994) did not point out these

consequences. Many names of Gmelin (1791), Röding (1798) and other authors would be displaced, because Karsten would become the first source giving indications to many of the figures of Martini & Chemnitz. Pfeiffer (1840) and Richardson et al. (1979) compiled early references to Martini & Chemnitz figures but did not consider Karsten's work. If Karsten's (1789) work were accepted as a source of names, at least 30 names in current use would be displaced, and another 14 would be affected by change of authorship, as shown in the following table; all are mollusks except the first two which are barnacles. Names in the second column are based in whole or in part on the same Martini or Chemnitz (1769–1788) figures and so are mostly objective synonyms of Karsten's names. Homonyms that could not be objective synonyms are listed in brackets in the second column. The third column gives the current names for the species, as far as I can trace them. Thirty-four Karsten names that themselves are probable junior synonyms or homonyms are not listed. Whether Bruguière (1789) has priority over Karsten (1789) is unknown.

| **Karsten name (page)** | **Synonym or homonym** | **Current name** |
|---|---|---|
| *Lepas coarctata* (149) | *Balanus perforatus* Bruguière, 1789 | *Balanus perforatus* |
| *L. spinosa* (149) | *B. spinosus* Bruguière, 1789 | *Megabalanus spinosus* |
| *Mya oblonga* (152) | *Mya oblonga* Gmelin, 1791 | *Lutraria oblonga* |
| *Tellina spengleri* (156) | *Tellina spengleri* Gmelin, 1791 | *Tellina spengleri* |
| *T. inflata* (156) | *T. inflata* Gmelin, 1791 | *Tellina inflata* |
| *T. polygona* (156) | *T. multangula* Gmelin, 1791 | ?*Gastrana multangula* |
| *Venus lusoria* (163) | *Venus lusoria* Röding, 1798 | *Meretrix lusoria* |
| *V. nebulosa* (164) | *V. nebulosa* Gmelin, 1791 | *Marcia opima* (Gmelin, 1791) |
| *V. cordato-literata* (164) | *V. japonica* Gmelin, 1791 | *Marcia japonica* |
| *V. striata* (165) | *V. striata* Gmelin, 1791 | *Marcia japonica* |
| *V. cincta* (166) | *V. cincta* Gmelin, 1791 | ?*Ventricolaria rigida* (Dillwyn,1817) |
| *Spondylus variegatus* (170) | *Spondylus variegatus* Röding, 1798 | *Spondylus variegatus* |
| *Chama lamellosus* (172) | *Chama foliacea* Gmelin, 1791 | ?*Chama congregata* Conrad, 1833 |
| | [non *C. lamellosa* Lamarck, 1806] | *Chama lamellosa* |
| *Arca rhomboidalis I. Orient.* (173) | *Arca inaequivalvis* Bruguière, 1789 | *Scapharca inaequivalvis* |
| *Pinna haud ignobilis* (186) | *Pinna nobilis* Gmelin, 1791 (var. δ) | *Pinna carnea* Gmelin, 1791 |
| *Conus vexillum* (191) | *Conus vexillum* Gmelin, 1791 | *Conus vexillum* |
| *C. achatinus* (192) | [non *C. achatinus* Gmelin, 1791] | *Conus achatinus* |
| *Cypraea scurro* (200) | *Cypraea scurra* Gmelin, 1791 | *Cypraea scurra* |
| *Voluta olivacea* (216) | *Oliva guttata* Fischer, 1807 | *Oliva tessellata* |
| | *O. tessellata* Lamarck, 1811 | |
| *V. nigrita* (216) | *Porphyria vidua* Röding, 1798 | *Oliva vidua* |
| *V. magellanica* (225) | *Voluta magellanica* Gmelin, 1791 | *Odontocymbiola magellanica* |
| *Buccinum scalariforme* (237) | *V. nassa* Gmelin, 1791 | *Scalptia nassa* |
| | [non *B. scalariforme* Möller, 1842] | *Buccinum scalariforme* |
| *Murex varicosus* (265) | *Neptunea varicosa* Röding, 1798 | *Pseudoneptunea varicosa* |
| *Trochus radiatus* (268) | *Trochus radiatus* Gmelin, 1791 | *Trochus radiatus* |
| *T. leviter muricatus* (272) | *T. stellatus* Gmelin, 1791 | *Trochus stellatus* |
| | [non *T. muricatus* Linnaeus, 1758] | |
| *T. cookianus* (270) | *T. cookii* Gmelin, 1791 | *Cookia sulcatus* (Gmelin, 1791) |
| *T. declive Ind. Occ.* (270) | *T. tectum* Gmelin, 1791 | *Modulus tectum* |
| *T. fenestratus imperforatus* (273) | *T. fenestratus* Gmelin, 1791 | *Tectus fenestratus* |
| *T. apiarium chinense* (267) | *T. alveare* Gmelin, 1791 | ? *Tectus fenestratus* |
| *T. acutangulus* (267) | *T. conus* Gmelin, 1791 | *Tectus conus* |
| *T. tuberosus* (273) | *T. mauritianus* Gmelin, 1791 | *Tectus mauritianus* |

| Karsten name (page) | Synonym or homonym | Current name |
|---|---|---|
| *Turbo cidaris pers.* (275) | *T. cidaris* Gmelin, 1791 (var. β) | *Turbo cidaris* |
| *T cidaris rufescens* (275) | *T. cidaris* Gmelin, 1791 (var. Σ) | *Turbo cidaris* |
| *T. castaneus Ind. Occ.* (276) | *T. castanea* Gmelin, 1791 | *Turbo castanea* |
| *T. delphinus nodosus* (279) | *T. exasperatus* Dillwyn, 1817 | *Angaria nodosus* (Reeve, 1842) |
| *T. helicineus* (282) | *T. helicoides* Gmelin, 1791 | *Aulopoma helicoides* |
| *Nerita pellis tigrina* (289) | *Cochlis tigrina* Röding, 1798 | *Natica tigrina* |
| *N. zikzak* (289) | *Nerita fulminea* Gmelin, 1791 | *Natica fulminea* |
| *N. rufescente varia* (290) | *N. cruentata* Gmelin, 1791 | *Natica fulminea* |
| *N. adusta* (290) | *N. melanostoma* Gmelin, 1791 | *Mammilla melanostoma* |
| *N. tessellata* (295) | *N. tessellata* Gmelin, 1791 | *Nerita tessellata* |
| *N. pica* (295) | *N. pica* Gmelin, 1791 | ? *Nerita tessellata* |
| *N. variegata* (296) | *N. versicolor* Gmelin, 1791 | *Nerita versicolor* |
| *N. nigerrima* (294) | *N. aterrima* Gmelin, 1791 | *Nerita aterrima* |
| *Haliotis iridis* (297) | *Haliotis iris* Gmelin, 1791 | *Haliotis iris* |
| *H. plicata* (297) | *H. australis* Gmelin, 1791 | *Haliotis australis* |
| *Patella magellanica* (302) | *Patella ferruginea* Gmelin, 1791 [non *P. magellanica* Gmelin, 1791] | *Patella ferruginea* *Nacella magellanica* |

7. Apart from his references to Martini & Chemnitz names, Karsten introduced only six new specific names for mollusks, four of which are listed by Sherborn (1902). Two of these names refer to species not noted by earlier authors: *Nerita reticulata* (p. 296, fig. 8), now known as *Nerita signata* Lamarck, 1822 and *Conus aulicus* var. *singularis* (p. 198, fig. 1), which appears to be *Conus terminus* Lamarck, 1810. The other four names are *Voluta subpraeputium* (p. 227, fig. 4), probably a juvenile of *Melo melo* [Lightfoot, 1786]; *Nerita chrysostomus* (p. 290, fig. 7), which is *Chrysostoma paradoxa* (Born, 1780); *Murex cancellatus* (p. 266, fig. 6), which is *Phos senticosus* (Linnaeus, 1758), and *Murex denticulatus* (p. 260) which was not illustrated and is therefore of unknown identity. Tursch, Duchamps & Greifeneder (1994) have begun using some of Karsten's names in preference to well-known later names; in particular, they have replaced *Oliva vidua* (Röding, 1798) with *Oliva nigrita* Karsten, 1789 and *Oliva tessellata* Lamarck, 1811 with *Oliva olivacea* Karsten, 1789. This action contravenes Article 23b of the Code, which states that 'The Principle of Priority is to be used to promote stability and is not intended to be used to upset a long-accepted name in its accustomed meaning through the introduction of an unused name that is its senior synonym'. Apart from the 1994 papers by Duchamps & Tursch and Tursch, Duchamps & Greifeneder, none of Karsten's names is in current use and disruption to zoological nomenclature would not result from the suppression of Karsten's work. Although lectotype designations for all the names in the second column of the list in para. 6 (above) have not been traced, it is clear that many would become objective or subjective junior synonyms, or junior homonyms, if Karsten's work was accepted as available.

8. An earlier draft of this application (Rosenberg, 1994) was posted in July 1994 on the Internet to more than 300 researchers who subscribe to the Mollusca listprocessor at Berkeley, California (listproc@ucmp1.berkeley.edu). Several comments were received, all supportive; copies of these comments have been given to the Commission's Secretariat. No malacologists objected to the idea of rejecting Karsten's work. I therefore propose that the Commission should suppress this work for nomenclatural purposes because its availability would disturb the stability of nomenclature in the Mollusca.

9. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress for nomenclatural purposes the work by D.L.G. Karsten (1789) entitled *Museum Leskeanum, regnum animale, quod ordine systematico*;

(2) to place the above work on the Official Index of Rejected and Invalid Works in Zoological Nomenclature.

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**Comments on the proposed conservation of the specific name of *Xerophila geyeri* Soós, 1926 (Mollusca, Gastropoda)**
(Case 2870; see BZN **51**: 105–107, 336–338; **52**: 176–178, 331–333)

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Prof Gittenberger, in his critique (BZN **52**: 259–260) of my previous comment (BZN **52**: 176–178), seems to believe that I was referring to himself with my mention of 'sloppy work'. This was never intended, as should have been evident from the context of my comment.

Gittenberger chose to refer to 'the graveyard of synonymy' even in the title of his (1993) paper. In his application (BZN **51**: 105–107, para. 3) Gittenberger explains that the five names he proposes for suppression were created by disciples of the 'Nouvelle École' of French malacologists which was notorious for promoting species splitting. The merits, or otherwise, of this school are, however, not at issue in the application concerning *Trochoidea geyeri* (Soós, 1926). It would be totally undesirable for the stability of nomenclature if acceptance of names on the basis of scientific merit of the original publication were to become part of nomenclatural practice.

The 'new respect' (para. 5 of Gittenberger's comment) which systematics may have gained is not based on a particular version of the rules of nomenclature. Gittenberger's implication that systematists must choose between my 'dogma' and respectable nomenclature is rather unrealistic, apart from overrating my contribution. I put forward (BZN **52**: 177) a reasoned proposal (to adopt *Helix arceuthophila* Mabille, 1881 as the valid name), not a dogma. While Gittenberger feels he needs to prevent readers from 'falling prey' to my proposal, I expect them to be sufficiently capable of judging for themselves the merits of my proposal and his comment.

My view (BZN **52**: 177) that *Trochoidea geyeri* is one of the less frequent species of European land snail is based on my own collecting experience as well as on published information. This is not invalidated by Gittenberger's view that the species name *geyeri* is well known. In the first sentence of my previous comment I acknowledged that Gittenberger's application to conserve the name *geyeri* is perfectly admissable under the Code, but I drew attention to the fact that the species is known mainly amongst collectors and taxonomists, who experience name changes all the time. A stronger case for conserving the name *geyeri* could be made if the species were widely known under this name by non-taxonomist biologists, and/or in agriculture, medicine and in the popular literature; however, to my knowledge, this is not the case.

(2) Bernard Hausdorf
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I am in favour of the proposal to conserve the specific name of *Xerophila geyeri* Soós, 1926 by the suppression of the five unused senior subjective synonyms cited by Gittenberger in his application (BZN **51**: 105–107), and by the suppression of

*Xerophila striata* f. *minor* Geyer, 1817 (para. 1 of the comment by Falkner & Proschwitz, BZN **52**: 331–332).

I have the impression that purely theoretical considerations, as well as general discussion about Article 79c of the Code and about the 'Nouvelle École', have obscured the facts of this case.

It is the purpose of the Principle of Priority and the Code in general to promote stability and not 'to upset a long-accepted name in its accustomed meaning through the introduction of an unused name that is its senior synonym' (Article 23b). The case for *geyeri* meets the two requirements for the suppression of unused senior synonyms specified in Article 79c. The five earlier names have not been used as valid during the preceding 100 years (not only the preceding 50 years). In view of this, Bouchet's argument (BZN **51**: 336–338) that the names are not 'forgotten' but 'misinterpreted' is insignificant. Secondly, *geyeri* has been applied to the molluscan species as its valid name by far more than five different authors and in far more than 10 publications during the preceding 50 years (see Gittenberger, 1993c, para. 5 of the application, and Gittenberger's comment on BZN **51**: 338). In contrast to Bouchet's (BZN **51**: 336–338) and Kadolsky's (BZN **52**: 176–178) views, *T. geyeri* is known not only to a small circle of specialist workers and collectors of land snails but also in various subdisciplines of biology (see Gittenberger, BZN **51**: 338). It is known to paleontologists as well as to ecologists and is included in several Red Lists. There is no provision in the Code that requires a species to be of public interest for a universally used name to be conserved. In their comments Bouchet, Kadolsky and Falkner & Proschwitz (**52**: 331–333) have not denied that the prima facie requirements of Article 79c are met in this case and I can see no reason for rejecting Gittenberger's proposal.

It is true that the nomenclature of Palaearctic pulmonates in general has not yet attained the desired stability. However, in contrast to Bouchet (para. 5 of his comment), I cannot see a connection between the proposed suppression of unused senior synonyms of a hitherto unchallenged and widely used name and name changes of other taxa in the HYGROMIIDAE, or between the proposed suppression and the fact that every new species of Palaearctic pulmonate may not yet have been discovered.

Falkner & Proschwitz stated in their comment (para. 3) that they are 'opposed to the general trend of neglecting critical revisory systematic studies'. Similar statements can be found in Kadolsky's comment. Although I am sure that these are not intended as accusations against Gittenberger, I think it necessary to emphasize that Gittenberger (and not Bouchet, Falkner, Kadolsky or Proschwitz) was the first and only one to revise the types of the senior synonyms of *Trochoidea geyeri* which were described more than a hundred years ago. It would, indeed, have been desirable to confirm the conspecificity of these taxa with *T. geyeri* by anatomical studies of topotypical material. Nevertheless, I think that it is justified to place the five senior names in the synonymy of *T. geyeri* on the strength of a conchological study. In the areas from which these names were described there are no known species which cannot be distinguished from *geyeri* by shell characters, and it is rather improbable that there are unknown species which are conchologically identical with *T. geyeri*.

We are indebted to Gittenberger (1993a–c) for not only the time-consuming revision of about 80 names introduced by the 'Nouvelle École', but also the qualified evaluation of these names. He did not 'reject in bulk all the names introduced by

these authors', as Bouchet has stated (para. 3 of his comment), but has rehabilitated some of them, placed most of them in the synonymy of well known senior names, and proposed the suppression of only five names which threaten an unchallenged, widely known junior name. It would have been easier for Gittenberger to replace *T. geyeri* with one of the senior names, as recommended by Bouchet and Kadolsky, rather than submit a proposal in line with the Code's explicit provisions on maintaining stability. I suspect that no one else will do such a time-consuming revision and prepare a proposal to stabilize the nomenclature if this well substantiated proposal is rejected.

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## Comment on the proposed conservation of the specific names of *Octopus vulgaris* Cuvier, [1797] and *Loligo vulgaris* Lamarck, 1798 (Mollusca, Cephalopoda)

(Case 2922; see BZN **52**: 24–26, 333–335)

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I support the application by Drs Guerra and Alonso-Zarazaga. Both the names *Octopus vulgaris* Cuvier, [1797] and *Loligo vulgaris* Lamarck, 1798 are familiar in zoological works. Besides this, these animals have been widely used in experimental studies for more than 50 years, and are always referred to in the literature by these names, including neurophysiological, psychological and biochemical journals, and also in books. There would be confusion if these names were now changed.

## Comment on the proposed conservation of the specific names of *Dodecaceria concharum* Örsted, 1843 and *D. fimbriata* (Verrill, 1879) (Annelida, Polychaeta) by the designation of a neotype for *D. concharum*

(Case 2899; see BZN **52**: 27–33, 261–262, 329–331)

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We write as the Nomenclatural Sub-Committee of the International Polychaete Association with a response on the application (BZN **52**: 27–33) by Dr P.H. Gibson and Mr David Heppell to conserve the specific names of *Dodecaceria concharum* Örsted, 1843 and *D. fimbriata* (Verrill, 1879), the comment by Pleijel & Mackie (BZN **52**: 261–262), and the reply by Heppell & Gibson (BZN **52**: 329-331).

1. The argument that the creation of a neotype for *Dodecaceria concharum* from outside the type locality will stabilise the name cannot be substantiated. The species within this genus have been so poorly defined that they can only be separated by specialist polychaete systematists. Therefore it is not surprising that they have been separated in marine faunas (which are compiled from records of specialists) but not differentiated in ecological reports written by generalists.

2. Pleijel & Mackie further suggest that the current distribution of the genus in northern European waters may be more complicated than currently thought and a correct historical interpretation will be less likely to confuse future workers, and we strongly agree with this. We concur fully with Pleijel & Mackie's comment that if the designation of a neotype for *D. concharum* is considered desirable then it should be from one of the localities mentioned by Örsted.

3. The non-systematic literature on the genus *Dodecaceria* is sparse, mainly consisting of papers on reproductive biology by Dr Gibson. If he publishes the correct name in his next paper it will be picked up by future workers and no confusion will occur.

4. We therefore suggest that there is no need for the Commission to use its plenary powers. No confusion will result from agreeing with the correct nomenclatural conclusion of George & Petersen (1991), rather than the reasoning of Gibson & Heppell. There is no justification for suppressing the specific names requested by Gibson & Heppell: *Nereis sextentacula* delle Chiaje, 1828 (see Muir, 1989, for the dating of this paper), *Terebella ostreae* Grube, 1853, *Heterocirrus saxicola* Grube, 1853 and *H. ater* Quatrefages, 1865.

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## Comment on the proposed conservation of *Monstrilla* Dana, 1849 and *Thaumaleus* Krøyer, 1849 (Crustacea, Copepoda)

(Case 2894; see BZN **52**: 245–249)

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I support Dr Grygier's proposal to suppress the generic name *Thaumatoessa* Krøyer in Gaimard, [1842]. The genus appeared under the currently universally used name *Thaumaleus* in Krøyer's own (1849) work. The valid generic names included in the order Monstrilloida should be given as *Monstrilla* Dana, 1849, *Thaumaleus* Krøyer, 1849, and probably also *Thespesiopsyllus* Sars, 1921.

**Comment on the proposal to remove the homonymy between BRACHYPTERINAE Erichson, [1845] (Insecta, Coleoptera) and BRACHYPTERINAE Zwick, 1973 (Insecta, Plecoptera), and proposed precedence of KATERETIDAE Ganglbauer, 1899 over BRACHYPTERINAE Erichson, [1845]**
(Case 2865; see BZN **51**: 309–311; **52**: 179–181, 335–336)

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I support the application (BZN **51**: 309–311) to remove the homonymy of the family-group names based on *Brachypterus* Kugelann, 1794 (Coleoptera) and *Brachyptera* Newport, 1848 (Plecoptera) by retaining BRACHYPTERINAE Erichson, 1845 in Coleoptera and changing Zwick's (1977) junior name in Plecoptera.

I do feel, however, that giving precedence to the family-group name KATERETIDAE over BRACHYPTERINAE Erichson (BZN **52**: 179–181) is not justified. Prof Newton's comment (BZN **52**: 335–336) shows that the name BRACHYPTERINAE has been used within the last 50 years. In addition to the three recent uses that he cites, Cooter (1995, *Coleopterist*, **4**: 37) also accepted this name which, as BRACHYPTERINA, is familiar to British coleopterists who still use Fowler's century-old *Coleoptera of the British Isles* as a standard work. As the family-group concerned was generally regarded as a subfamily of the NITIDULIDAE, the latter containing many species of economic importance, the reversion back to the older BRACHYPTERIDAE, rather than KATERETIDAE, will not affect the economic literature since this group, as far as I am aware, contains no species of economic importance. That taxonomists can rapidly revert to the older name is shown by the three recent references cited by Newton.

Pakaluk, Ślipiński & Lawrence (1994) mention the family name CERCIDAE Chenu & Desmarest, 1851 (based on *Cercus* Latreille, 1796, a junior synonym of *Kateretes* Herbst, 1793). CERCIDAE also has priority over KATERETIDAE.

The type species designation for *Kateretes* appears to date from Audisio (1993). I have seen three earlier designations (for *Cateretes* and *Catheretes*: Westwood, [1838–1840]; Hope, 1840; Thomson, 1859) but none is valid since the species designated was not one of those included by Herbst (1793) or listed in synonymy. It is possible that other overlooked designations exist which threaten the current concept of *Kateretes*.

I agree with Newton and suggest upholding the current priority of BRACHYPTERIDAE over the other homonymous and synonymous names.

**Comments on the proposed conservation of *Hydromantes* Gistel, 1848 (Amphibia, Caudata) by the designation of *Salamandra genei* Temminck & Schlegel, 1838 as the type species**
(Case 2868; see BZN **50**: 219–223; **51**: 149–153; **52**: 183–186, 339–342)

Hobart M. Smith

*Department of Environmental, Population and Organismic Biology, University of Colorado, Boulder, Colorado 80309–0334, U.S.A.*

David B. Wake

*Museum of Vertebrate Zoology, University of California, Berkeley, California 94720, U.S.A.*

Mark R. Jennings

*Fish and Wildlife Service, National Ecology Research Center, United States Department of the Interior, 1830 Sharon Avenue, Davis, California 95616, U.S.A.*

The comments made by Dr Sebastiano Salvidio (published in BZN **52**: 339–340) and from Prof Alain Dubois (BZN **52**: 340–342) persuade us to endorse the proposals put forward by the latter to replace those made originally by two of us (Smith & Wake) in BZN **50**: 221.

Dubois's proposals are to designate the American species *Spelerpes platycephalus* Camp, 1916 as the type species of *Hydromantes* Gistel, 1848, rather than the European species *Salamandra genei* Temminck & Schlegel, 1838, and to place the names *Geotriton* Bonaparte, [1832] and *Hydromantoides* Lanza & Vanni, 1981 (which would become a junior objective synonym of *Hydromantes*) on the Official Index. The overwhelming desires of both European and American workers for stability would, under these proposals, be met by all who ever deal with *Hydromantes* (auctt., sensu lato) in both the areas that it occupies.

**Comment on the proposed conservation of HEMIDACTYLIINI Hallowell, 1856 (Amphibia, Caudata)**
(Case 2869; see BZN **50**: 129–132; **51**: 153–156, 264–265, 341–342; **52**: 337–338)

Hobart M. Smith

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David B. Wake

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The main points raised by Dubois (BZN **52**: 337–338) are that our application ill-advisedly seeks (1) to conserve a 'rather obscure' name (HEMIDACTYLIINI Hallowell,

1856) used 'less than 20 times' over a span of 'less than 30 years'; (2) in so doing, to suppress a family-group name (MYCETOGLOSSINA) that might be revived if its type genus (*Mycetoglossus* Bonaparte, [1839], the name of which is a junior objective synonym of *Pseudotriton* Tschudi, 1838) is ever regarded as belonging to a family group different from that to which *Hemidactylium* Tschudi, 1838 belongs; (3) to make a test case 'to completely abandon the principle of priority and to free systematics from the tyranny of the past', and to press selectively, not consistently, for abandonment of priority as a deciding factor in choosing between synonyms. We comment in the following paragraphs upon each of these three points.

(1) We maintain that it is preferable to continue use of the name HEMIDACTYLIINI on the basis of its usage despite the priority of MYCETOGLOSSINA, which was a 'forgotten' name for 134 years until revived by Dubois (1984). Application of the principle of priority is rightly not limitless, as is attested by the provisions of Article 79 of the Code.

(2) It is true that a family-group taxon to which *Pseudotriton*, the valid senior synonym of *Mycetoglossus*, belongs may ultimately be regarded as different from the comparable taxon containing *Hemidactylium*, although at present no such distinction is justified. However, there would be no loss in suppressing MYCETOGLOSSINA, based as it is on an objectively invalid generic name and never having been used except as revived in 1984 to replace HEMIDACTYLIINI. The name MYCETOGLOSSINA is a nomen oblitum (in the sense of a long-forgotten, unused name) that under the 1961 and 1964 Codes would automatically have been rejected; under the current Code it requires action by the Commission for suppression, as we have requested.

(3) We categorically support the principle of priority, without which biological nomenclature would be chaotic. In referring to 'mindless adherence to priority' we simply mean its application without regard to what we call 'the principle of stability'. Evaluation of stability is subjective, to be sure, whereas priority is objective, but stability merits far more consideration than it gets from some systematists. It is the prime purpose of the Code (see the Preamble, p. 3). The long history of the rule of priority over all else is not easily altered to a balanced consideration of the overall impact of any given name change. At one time the literature was limited to rather a few specialists, whereas these days the general public and leaders in all fields are being broadly educated in the diversity, exploitation, conservation and management of an increasing number of life forms. Use of scientific names in a vast variety of contexts has increased enormously in the last few decades, and will continue to do so. For that reason it has become increasingly important to maintain stability of scientific names, for they are vital to communication far afield from working systematists. Specialists are, however, the guardians of biological nomenclature, and it is their responsibility to see that it remains as stable as possible, consistent with taxonomic knowledge. As stated by Bock (BZN **52**: 287): 'Nothing is gained and much is lost every time an established name is replaced by an unused senior synonym regardless of why the senior synonym had become unused'.

In conclusion, we reiterate that in our view the proposals of our application are of sound merit.

**Comment on the proposed conservation of the specific name of *Phyllophis carinata* Günther, 1864 (currently *Elaphe carinata*; Reptilia, Serpentes)**
(Case 2850; see BZN **52**: 166–169, 345–346)

Michihisa Toriba

*Japan Snake Institute, Yabuzuka-honmachi, Nitta-gun, Gunma 379-23, Japan*

*Elaphe carinata* (Günther, 1864) is a large and fairly common snake with a wide distributional range from southwestern Japan, China and Taiwan, to northern Indo-China. It feeds on various vertebrates and is an important predator.

A change of name to *E. phyllophis* (Boulenger, 1891) would cause serious disruption in a number of scientific fields. I therefore support the proposal by Smith, Ota & Wallach to conserve the name *E. carinata* (Günther).

# OPINION 1822

## *Helix nitidula* Draparnaud, 1805 and *H. nitens* Michaud, 1831 (currently *Aegopinella nitidula* and *A. nitens*; Mollusca, Gastropoda): specific names conserved, and a neotype designated for *H. nitidula*

**Keywords.** Nomenclature; taxonomy; Gastropoda; terrestrial snails; *Helix nitidula*; *Helix nitens*.

**Ruling**

(1) Under the plenary powers:
  (a) all previous fixations of type specimens for the nominal species *Helix nitidula* Draparnaud, 1805 are hereby set aside and specimen no. 86934 in the Naturhistorisches Museum, Vienna, described and figured by Gittenberger (1993), is designated the neotype;
  (b) the specific name *nitens* Gmelin, [1791], as published in the binomen *Helix nitens*, and all uses of the name *Helix nitens* prior to the publication of *Helix nitens* Michaud, 1831, are hereby suppressed for the purposes of both the Principle of Priority and the Principle of Homonymy.

(2) To the entry for *Helix nitidula* Draparnaud, 1805 on the Official List of Specific Names in Zoology is hereby added the endorsement that it is defined by the neotype designated in (1)(a) above.

(3) The name *nitens* Michaud, 1831, as published in the binomen *Helix nitens* and as defined by the lectotype designated by Forcart (1959), is hereby placed on the Official List of Specific Names in Zoology.

(4) The name *nitens* Gmelin, [1791], as published in the binomen *Helix nitens* and as suppressed in (1)(b) above, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology (a junior objective synonym of the specific name of *Helix nitida* Müller, 1774).

**History of Case 2871**

An application for the conservation of the specific names of *Helix nitidula* Draparnaud, 1805 and *H. nitens* Michaud, 1831, and for the designation of a neotype for *H. nitidula*, was received from Prof Edmund Gittenberger (*Nationaal Natuurhistorisch Museum, Leiden, The Netherlands*) on 15 December 1992. After correspondence the case was published in BZN **50**: 205–208 (September 1993). Notice of the case was sent to appropriate journals.

The specific name of *Helix nitidula* Draparnaud, 1805 was placed on the Official List in Opinion 336 (March 1955). However, the identity of the only syntype still remaining (in the Naturhistorisches Museum, Vienna) was not then considered.

It was noted on the voting paper that support for the application was given by, among others, all the 20 participants at a European non-marine molluscan nomenclature meeting in Heidelberg in 1992 (para. 8 of the application).

It was also noted on the voting papar that Draparnaud lived and died in Montpellier and that Locard (1895) recorded that, following Draparnaud's death in 1804, his mollusc collection was sold in 1820 to the Naturhistorisches Museum, Vienna (para. 2 of the application; see also Dance, 1986, p. 210). However, Jeffreys

(1862, p. 310) wrote: 'After the foregoing part of this volume [*British Conchology*, vol. 1] had been printed, I received a communication of considerable importance as regards the determination of some of the species described by Draparnaud. It consisted of the original types or specimens of that author, from the public museum at Montpellier, and which, through the great kindness of the Director, M. Michaud, I have now had the opportunity of examining and comparing with my own specimens'.

Draparnaud material seen by Jeffreys (1862, p. 310) included three specimens of *Helix nitidula* var. β (identified by Jeffreys as *Zonites purus* and *Z. radiatulus*, both of Alder (1830); paras. 1 and 3 of the application) but no specimens of '*H. nitidula*'.

It is not known on how many specimens Draparnaud (1805) based *H. nitidula* (para. 1 of the application), and the possible existence of Draparnaud original type material additional to that in Vienna delayed voting on the case. Assistance from Dr P. Bouchet (Paris) was sought; he wrote to the Commission Secretariat (March 1995): 'I am afraid that my investigations in Montpellier have not been very fruitful. A colleague of mine, Dr Joel André, is a malacologist working at the university there. We were both aware of 19th century malacological collections (e.g. Paladilhe) in the local university collections, but we had never heard of Draparnaud material still in existence other than in Vienna. There is currently no natural history museum in Montpellier and it is not clear where the material in the 'public museum' referred to by Jeffreys might have ended up. Dr André has been searching in collections of various departments at the University of Montpellier but without success. The material referred to by Jeffreys must be considered lost or, if still in existence, not accessible'.

For practical purposes the existence of Draparnaud specimens in Montpellier was ruled out and the case was submitted for voting.

**Dance, S.P.** 1986. *A history of shell collecting*. xv, 265 pp., 32 pls. Brill, Leiden.
**Jeffreys, J.G.** 1862. *British conchology* ..., vol. 1 (Land and freshwater shells). cxiv, 341 pp., 8 pls. Voorst, London.

**Decision of the Commission**

On 1 September 1995 the members of the Commission were invited to vote on the proposals published in BZN **50**: 207. At the close of the voting period on 1 December 1995 the votes were as follows:

Affirmative votes – 25: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Trjapitzin

Negative votes — none.

No votes were received from Ride and Uéno.

**Original references**

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

*nitens*, *Helix*, Gmelin, [1791], *Caroli a Linné Systema Naturae*, Ed. 13, vol. 1, part 6, p. 3633.

*nitens*, *Helix*, Michaud, 1831, *Complément de l'histoire naturelle des mollusques terrestres et fluviatiles de la France, de J.P.R. Draparnaud*, p. 44.

The following is the reference for the designation of the lectotype of *Helix nitens* Michaud, 1831:

**Forcart, L.** 1959. *Archiv für Molluskenkunde*, **88**(1–3): 24.

# OPINION 1823

## *Nesopupa* Pilsbry, 1900 (Mollusca, Gastropoda): conserved

**Keywords.** Nomenclature; taxonomy; Gastropoda; terrestrial snails; *Nesopupa*.

**Ruling**

(1) Under the plenary powers the following names are hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
   (a) *Ptychochilus* Boettger, 1881;
   (b) *Ptychochylus* Boettger, 1881 (alternate original spelling of *Ptychochilus*).

(2) The name *Nesopupa* Pilsbry, 1900 (gender: feminine), type species by original designation of the replaced nominal genus *Ptychochilus* Boettger, 1881, *Pupa tantilla* Gould, 1847, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *tantilla* Gould, 1847, as published in the binomen *Pupa tantilla* (specific name of the type species of *Nesopupa* Pilsbry, 1900), is hereby placed on the Official List of Specific Names in Zoology.

(4) The following names are hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology:
   (a) *Ptychochilus* Boettger, 1881, as suppressed in (1)(a) above;
   (b) *Ptychochylus* Boettger, 1881, as suppressed in (1)(b) above.

**History of Case 2904**

An application for the conservation of the generic name *Nesopupa* Pilsbry, 1900 was received from Drs Robert H. Cowie, Carl C. Christensen and Neal L. Evenhuis (*Bishop Museum, Honolulu, Hawaii, U.S.A.*) on 19 September 1993. After correspondence the case was published in BZN **51**: 217–218 (September 1994). Notice of the case was sent to appropriate journals.

**Decision of the Commission**

On 1 September 1995 the members of the Commission were invited to vote on the proposals published in BZN **51**: 218. At the close of the voting period on 1 December 1995 the votes were as follows:

Affirmative votes – 24: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Trjapitzin

Negative votes — 1: Kabata.

No votes were received from Ride and Uéno.

**Original references**

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

*Nesopupa* Pilsbry, 1900, *Proceedings of the Academy of Natural Sciences of Philadelphia*, **52**: 431.

*Ptychochilus* Boettger, 1881, *Conchologische Mittheilungen*, **1**(4): 47.

*Ptychochylus* Boettger, 1881, *Conchologische Mittheilungen*, **1**(4): 48.

*tantilla*, *Pupa*, Gould, 1847, *Proceedings of the Boston Society of Natural History*, **2**: 197.

# OPINION 1824

## *Ischyrus* Lacordaire, 1842, *Lybas* Lacordaire, 1842, *Mycotretus* Lacordaire, 1842 and *Megischyrus* Crotch, 1873 (Insecta, Coleoptera): conserved

**Keywords.** Nomenclature; taxonomy; Coleoptera; *Ischyrus*; *Lybas*; *Megischyrus*; *Mycotretus*.

**Ruling**

(1) Under the plenary powers the following names are hereby suppressed for the purposes of both the Principle of Priority and the Principle of Homonymy:
  (a) *Ischyrus* Dejean, 1836, and all uses of the name *Ischyrus* prior to the publication of *Ischyrus* Lacordaire, 1842;
  (b) *Lybas* Dejean, 1836 and all uses of the name *Lybas* prior to the publication of *Lybas* Lacordaire, 1842;
  (c) *Mycotretus* Dejean, 1836 and all uses of the name *Mycotretus* prior to the publication of *Mycotretus* Lacordaire, 1842.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:
  (a) *Ischyrus* Lacordaire, 1842 (gender: masculine), type species by subsequent designation by Crotch (1873) *Erotylus quadripunctatus* Olivier, 1792;
  (b) *Lybas* Lacordaire, 1842 (gender: masculine), type species by subsequent designation by Crotch (1876) *Lybas normalis* Lacordaire, 1842;
  (c) *Megischyrus* Crotch, 1873 (gender: masculine), type species by original designation *Erotylus undatus* Olivier, 1792;
  (d) *Mycotretus* Lacordaire, 1842 (gender: masculine), type species by subsequent designation by Boyle (1956) *Erotylus lesueuri* Chevrolat, 1835.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:
  (a) *quadripunctatus* Olivier, 1792, as published in the binomen *Erotylus quadripunctatus* (specific name of the type species of *Ischyrus* Lacordaire, 1842);
  (b) *normalis* Lacordaire, 1842, as published in the binomen *Lybas normalis* (specific name of the type species of *Lybas* Lacordaire, 1842);
  (c) *undatus* Olivier, 1792, as published in the binomen *Erotylus undatus* (specific name of the type species of *Megischyrus* Crotch, 1873);
  (d) *lesueuri* Chevrolat, 1835, as published in the binomen *Erotylus lesueuri* (specific name of the type species of *Mycotretus* Lacordaire, 1842).

(4) The following names are hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology:
  (a) *Apolybas* Alvarenga, 1965 (a junior objective synonym of *Lybas* Lacordaire, 1842);
  (b) *Ischyrus* Dejean, 1836, as suppressed in (1)(a) above;
  (c) *Lybas* Dejean, 1836, as suppressed in (1)(b) above;

(d) *Micrischyrus* Alvarenga, 1965 (a junior objective synonym of *Ischyrus* Lacordaire, 1842);

(e) *Mycotretus* Dejean, 1836, as suppressed in (1)(c) above.

**History of Case 2885**

An application for the conservation of the current usage of the generic names *Ischyrus* Lacordaire, 1842, *Lybas* Lacordaire, 1842, *Mycotretus* Lacordaire, 1842 and *Megischyrus* Crotch, 1873 was received from Dr Paul E. Skelley (*University of Florida, Gainesville, Florida, U.S.A.*) and Dr Michael A. Goodrich (*Eastern Illinois University, Charleston, Illinois, U.S.A.*) on 7 April 1993. After correspondence the case was published in BZN **51**: 128–132 (June 1994). Notice of the case was sent to appropriate journals.

A comment in support from Prof Richard C. Funk (*Eastern Illinois University, Charleston, Illinois, U.S.A.*) was published in BZN **52**: 73 (March 1995).

**Decision of the Commission**

On 1 September 1995 the members of the Commission were invited to vote on the proposals published in BZN **51**: 130–131. At the close of the voting period on 1 December 1995 the votes were as follows:

Affirmative votes — 23: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Trjapitzin

Negative votes — 2: Martins de Souza and Minelli.

No votes were received from Ride and Uéno.

Lehtinen commented: 'It is important to preserve the current concepts of the genera *Ischyrus*, *Lybas* and *Mycotretus* but I prefer to attribute authorship of the names to Dejean (1836), where they are valid under the Code. As they are older than Lacordaire's names the risk of confusing synonyms becomes smaller'.

**Original references**

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

*Apolybas* Alvarenga, 1965, *Boletim da Universidade Federal do Paraná*, Zoologia, **2**(6): 81.

*Ischyrus* Dejean, 1836, *Catalogue des coléoptères de la collection de M. le Comte Dejean*, Ed. 2, Livr. 5, p. 428.

*Ischyrus* Lacordaire, 1842, *Monographie des Erotyliens, famille de l'ordre des coléoptères*, p. 89.

*lesueuri*, *Erotylus*, Chevrolat, 1835, *Coléoptera du Mexique*, Cent. 2, fasc. 8, no. 175.

*Lybas* Dejean, 1836, *Catalogue des coléoptères de la collection de M. le Comte Dejean*, Ed. 2, Livr. 5, p. 429.

*Lybas* Lacordaire, 1842, *Monographie des Erotyliens, famille de l'ordre des coléoptères*, p. 228.

*Megischyrus* Crotch, 1873, *Cistula Entomologica*, **1**: 143.

*Micrischyrus* Alvarenga, 1965, *Boletim da Universidade Federal do Paraná*, Zoologia, **2**(6): 86.

*Mycotretus* Dejean, 1836, *Catalogue des coléoptères de la collection de M. le Comte Dejean*, Ed. 2, Livr. 5, p. 428.

*Mycotretus* Lacordaire, 1842, *Monographie des Erotyliens, famille de l'ordre des coléoptères*, p. 132.

*normalis*, *Lybas*, Lacordaire, 1842, *Monographie des Erotyliens, famille de l'ordre des coléoptères*, p. 235.

*quadripunctatus*, *Erotylus*, Olivier, 1792, *Encyclopédie méthodique. Histoire naturelle des insectes*, vol. 6, p. 437.

*undatus*, *Erotylus*, Olivier, 1792, *Encyclopédie méthodique. Histoire naturelle des insectes*, vol. 6, p. 434.

The following is the reference for the designation of *Erotylus undatus* Olivier, 1792 as the type species of the nominal genus *Megischyrus* Crotch, 1873, and of *Erotylus quadripunctatus* Olivier, 1792 as the type species of the nominal genus *Ischyrus* Lacordaire, 1842:
**Crotch, G.R.** 1873. *Cistula Entomologica*, **1**: 143, 144 respectively.

The following is the reference for the designation of *Lybas normalis* Lacordaire, 1842 as the type species of the nominal genus *Lybas* Lacordaire, 1842:
**Crotch, G.R.** 1876. *Cistula Entomologica*, **1**: 471.

The following is the reference for the designation of *Erotylus lesueuri* Chevrolat, 1835 as the type species of the nominal genus *Mycotretus* Lacordaire, 1842:
**Boyle, W.W.** 1956. *Bulletin of the American Museum of Natural History*, **110**(2): 137.

# OPINION 1825

## *Poecilonota* Eschscholtz, 1829, *Palmar* Schaefer, 1949 and *Scintillatrix* Obenberger, 1956 (Insecta, Coleoptera): conserved by the designation of *Buprestis variolosa* Paykull, [1799] as the type species of *Poecilonota* and *B. rutilans* Fabricius, [1777] as the type species of *Scintillatrix*

**Keywords.** Nomenclature; taxonomy; Coleoptera; jewel beetles; *Palmar*; *Poecilonota*; *Scintillatrix*.

**Ruling**

(1) Under the plenary powers:
  (a) all previous fixations of type species for the nominal genus *Poecilonota* Eschscholtz, 1829 are hereby set aside and *Buprestis variolosa* Paykull, [1799] is designated as the type species;
  (b) all previous fixations of type species for the nominal genus *Scintillatrix* Obenberger, 1956 are hereby set aside and *Buprestis rutilans* Fabricius, [1777] is designated as the type species;
  (c) the generic name *Dendrochariessa* Gistl, 1848 is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:
  (a) *Poecilonota* Eschscholtz, 1829 (gender: feminine), type species by designation under the plenary powers in (1)(a) above *Buprestis variolosa* Paykull, [1799];
  (b) *Scintillatrix* Obenberger, 1956 (gender: feminine), type species by designation under the plenary powers in (1)(b) above *Buprestis rutilans* Fabricius, [1777];
  (c) *Palmar* Schaefer, 1949 (gender: feminine), type species by original designation *Buprestis festiva* Linnaeus, 1767.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:
  (a) *variolosa* Paykull, [1799], as published in the binomen *Buprestis variolosa* (specific name of the type species of *Poecilonota* Eschscholtz, 1829);
  (b) *rutilans* Fabricius, [1777], as published in the binomen *Buprestis rutilans* (specific name of the type species of *Scintillatrix* Obenberger, 1956);
  (c) *festiva* Linnaeus, 1767, as published in the binomen *Buprestis festiva* (specific name of the type species of *Palmar* Schaefer, 1949).

(4) The following names are hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology:
  (a) *Dendrochariessa* Gistl, 1848, as suppressed in (1)(c) above;
  (b) *Descarpentriesina* Leraut, 1983 (a junior objective synonym of *Poecilonota* Eschscholtz, 1829);
  (c) *Lampra* Dejean, 1833 (a junior homonym of *Lampra* Hübner, 1821).

**History of Case 2837/1**

An application for the conservation of the generic names *Poecilonota* Eschscholtz, 1829, *Palmar* Schaefer, 1949 and *Scintillatrix* Obenberger, 1956 by the designation of *Buprestis variolosa* Paykull, [1799] as the type species of *Poecilonota* and *B. rutilans* Fabricius, [1777] as the type species of *Scintillatrix* was received from Herr Hans Mühle (*Munich, Germany*) on 27 November 1991. After correspondence the case was published in BZN **50**: 27–30 (March 1993). Notice of the case was sent to appropriate journals.

Comments in support were received from Dr C.L. Bellamy (*Transvaal Museum, Pretoria, South Africa*, published in BZN **50**: 56, March 1993); Dr Richard L. Westcott (*Oregon Department of Agriculture, Salem, Oregon, U.S.A.*, published in BZN **50**: 232, September 1993); and Dr G.H. Nelson (*College of Osteopathic Medicine of the Pacific, Pomona, California, U.S.A.*, published in BZN **51**: 45, March 1994).

The application sought to place the generic name *Palmar* Schaefer, 1949, among others, on the Official List. It was noted on the voting paper that, as cited in para. 5, the name was established for a subgenus of *Lampra* Dejean, 1833 and *Buprestis festiva* Linnaeus, 1767 was designated as the type species. However, Casey (1909) had designated the same species as the type of *Lampra*. *B. festiva* was therefore the type species of the nominotypical subgenus of *Lampra* (Articles 43a and 61b of the Code), rendering *Palmar* a junior objective synonym of *Lampra*. Commission approval of the designation of *B. rutilans* Fabricius, [1777] as the type species of *Scintillatrix* Obenberger, 1956, a replacement name for the preoccupied *Lampra* Dejean, would allow the accustomed usage of *Palmar* to continue, with *B. festiva* as the type species (Articles 67h and 72e of the Code).

**Decision of the Commission**

On 1 September 1995 the members of the Commission were invited to vote on the proposals published in BZN **50**: 29. At the close of the voting period on 1 December 1995 the votes were as follows:

Affirmative votes — 23: Bayer, Bock, Cocks, Cogger, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Lehtinen (part), Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Trjapitzin

Negative votes — 2: Bouchet and Štys.

No votes were received from Ride and Uéno.

Voting for, Martins de Souza commented: 'As noted in para. 7 of the application, Leraut's (1983) actions were 'in formal accord with the Code'. However, comments from buprestid workers indicate that great confusion would result if his proposals were adopted. I therefore vote in favour but with some reservations'. Voting against, Bouchet commented: 'The Commission is requested to validate numerous breaches against the Code. However, usage has not been clearly demonstrated and the references cited are insufficient to convince me that stability of nomenclature will be seriously threatened by a strict application of the Code. The abstract of the application refers to the economic importance of *Scintillatrix rutilans* but this aspect of the usage of the name has not been developed'. Štys commented: 'The complex nomenclatural situation concerns six generic names all of which have been correctly interpreted by Leraut (1983) who, unlike other buprestidologists, did not ignore the

valid fixations of type species by Westwood ([1838]) and Casey (1909). In my view the proposed pragmatic solution, maintaining incorrect usage and refuting the work of those who followed the Code, goes too far in this case. Long-term stability of nomenclature would be better served by a strict observance of the Code'. Lehtinen voted for proposals (1)(a), (2)(a), (3)(a), (4)(b) and (4)(c) of para. 8 on BZN **50**: 29 but against the remaining proposals.

**Original references**

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

*Dendrochariessa* Gistl, 1848, *Naturgeschichte des Thierreiches für höhere Schulen*, p. ix.

*Descarpentriesina* Leraut, 1983, *Entomologica Gallica*, **1**(1): 6.

*festiva*, *Buprestis*, Linnaeus, 1767, *Systema Naturae*, Ed. 12, vol. 1, part 2, p. 663.

*Lampra* Dejean, 1833, *Catalogue des coléoptères de la collection de M. le Comte Dejean*, Ed. 2, part 1, p. 78.

*Palmar* Schaefer, 1949, *Miscellanea Entomologica*, Supplément: 167.

*Poecilonota* Eschscholtz, 1829, *Zoologischer Atlas, enthaltend abbildungen und Beschreibungen neurer Thierarten, während des Flottcapitains von Kotzebue zweiter Reise um die Welt, auf der Russisch-Kaiserlichen Kriegsschlupp* Predpriaetië *in den Jahren 1823-1826*, part 1, p. 9.

*rutilans*, *Buprestis*, Fabricius, [1777], *Genera insectorum ...*, p. 235.

*Scintillatrix* Obenberger, 1956, *Acta Entomologica Musei Nationalis Pragae*, **30**: 41.

*variolosa*, *Buprestis*, Paykull, [1799], *Fauna Suecica. Insecta*, vol. 2, p. 219.

The following is the reference for the fixation of *Buprestis festiva* Linnaeus, 1767 as the type species of the nominal genus *Palmar* Schaefer, 1949:

**Schaefer, L.** 1949. *Miscellanea Entomologica*, Supplément: 167.

# OPINION 1826

## *Melanophila* Eschscholtz, 1829 and *Phaenops* Dejean, 1833 (Insecta, Coleoptera): conserved by the designation of *Buprestis acuminata* De Geer, 1774 as the type species of *Melanophila*

**Keywords.** Nomenclature; taxonomy; Coleoptera; jewel beetles; *Melanophila*; *Phaenops*.

**Ruling**

(1) Under the plenary powers:
  (a) all previous fixations of type species for the nominal genus *Melanophila* Eschscholtz, 1829 are hereby set aside and *Buprestis acuminata* De Geer, 1774 is designated as the type species;
  (b) it is hereby ruled that the gender of the generic name *Phaenops* Dejean, 1833 is feminine.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:
  (a) *Melanophila* Eschscholtz, 1829 (gender: feminine), type species by designation under the plenary powers in (1)(a) above *Buprestis acuminata* De Geer, 1774;
  (b) *Phaenops* Dejean, 1833 (gender: feminine, as ruled in (1)(b) above), type species by designation by Théry (1942) *Buprestis cyanea* Fabricius, 1775.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:
  (a) *acuminata* De Geer, 1774, as published in the binomen *Buprestis acuminata* (specific name of the type species of *Melanophila* Eschscholtz, 1829);
  (b) *cyanea* Fabricius, 1775, as published in the binomen *Buprestis cyanea* (specific name of the type species of *Phaenops* Dejean, 1833).

**History of Case 2837*l***

An application for the conservation of the generic names *Melanophila* Eschscholtz, 1829 and *Phaenops* Dejean, 1833 by the designation of *Buprestis acuminata* De Geer, 1774 as the type species of *Melanophila* was received from Herr Hans Mühle (*Munich, Germany*) on 27 November 1991. After correspondence the case was published in BZN **50**: 31–34 (March 1993). Notice of the case was sent to appropriate journals.

An opposing comment from Dr Richard L. Westcott (*Oregon Department of Agriculture, Salem, Oregon, U.S.A.*) was published in BZN **50**: 232–233 (September 1993), together with a reply in support from Dr R.G. Booth (*International Institute of Entomology, c/o The Natural History Museum, London, U.K.*). Dr Booth also pointed out that under Article 30a(ii) of the Code the name *Phaenops* is masculine, although it was treated as feminine by its author and by all subsequent workers. He proposed (BZN **50**: 233) that *Phaenops* should continue to be used as feminine.

A reply to Dr Westcott's comment by the author of the application was published in BZN **51**: 43–44 (March 1994), together with a further comment from Dr Westcott and an opposing comment from Dr G.H. Nelson (*College of Osteopathic Medicine of the Pacific, Pomona, California, U.S.A.*). A comment in support from Drs Svatopluk Bílý (*National Museum, Praha, Czech Republic*) & C.L. Bellamy (*Transvaal Museum, Pretoria, South Africa*) was published in BZN **52**: 70 (March 1995).

It was noted on the voting paper that the application sought to maintain the usage of the name *Melanophila* Eschscholtz, 1829 by setting aside the earlier, long overlooked type species designation by Westwood ([1838]) of *Bupestris tarda* Fabricius, 1792 (= *B. cyanea* Fabricius, 1775) and by designating *Buprestis acuminata* De Geer, 1774 as the type. This designation would also conserve the name *Phaenops* Dejean, 1833 (type species *B. cyanea*).

The usage of these generic names is that which has been traditionally followed by most European workers since the publication of Lacordaire (1857). An exception is Leraut (1983), who followed Westwood's ([1838]) type species designation and used the name *Melanophila* for the genus *Phaenops* as currently understood, and adopted the unused name *Trachypteris* Kirby, 1837 (type species *B. decostigma* Fabricius, 1787) for the *decostigma-acuminata* group of species.

Until recently, most workers in the United States, where *B. cyanea* does not occur, included *Phaenops* as a subgenus or as a synonym of *Melanophila*. However, in the past six years (since Nelson, 1989) American workers have used the name *Melanophila* only for the *cyanea*-related group of species, following Leraut (1983) but not in accord with previous (and present European) nomenclature, and have adopted the unused name *Oxypteris* Kirby, 1837 (type species *B. appendiculata* Fabricius, 1792, a junior synonym of *B. acuminata*) for *acuminata* and other species.

**Decision of the Commission**

On 1 September 1995 the members of the Commission were invited to vote on the proposals published in BZN **50**: 32–33 and 233. At the close of the voting period on 1 December 1995 the votes were as follows:

Affirmative votes — 19: Bayer, Bock, Cocks, Cogger, Dupuis, Halvorsen, Heppell, Kabata (part), Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Nielsen, Nye, Savage, Schuster, Starobogatov, Trjapitzin

Negative votes — 6: Bouchet, Corliss, Hahn, Holthuis, Minelli and Štys.

No votes were received from Ride and Uéno.

Kabata voted for the conservation of the generic names *Melanophila* and *Phaenops* but against the proposal to continue to treat the latter as feminine.

**Original references**

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

*acuminata*, *Buprestis*, De Geer, 1774, *Mémoires pour servir à l'histoire des insectes*, vol. 4, p. 133.

*cyanea*, *Buprestis*, Fabricius, 1775, *Systema entomologiae, sistens insectorum classes, ordines, genera, species ...*, p. 223.

*Melanophila* Eschscholtz, 1829, *Zoologischer Atlas, enthaltend abbildungen und Beschreibungen neurer Thierarten, während des Flottcapitains von Kotzebue zweiter Reise um die Welt, auf der Russisch-Kaiserlichen Kriegsschlupp* Predpriaetië *in den Jahren 1823–1826*, part. 1, p. 9.

*Phaenops* Dejean, 1833, *Catalogue des coléoptères de la collection de M. le Comte Dejean*, Ed. 2, part 1, p. 79.

The following is the reference for the fixation of *Buprestis cyanea* Fabricius, 1775 as the type species of the nominal genus *Phaenops* Dejean, 1833:

**Théry, A.** 1942. *Faune de France*, **41**: 73.

# OPINION 1827

## *Hydrophoria* Robineau-Desvoidy, 1830 (Insecta, Diptera): *Musca lancifer* Harris, [1780] designated as the type species, and a neotype designated for *M. lancifer*

**Keywords.** Nomenclature; taxonomy; Diptera; *Hydrophoria*; *Hydrophoria lancifer*.

**Ruling**

(1) Under the plenary powers:

(a) all previous fixations of type specimens for the nominal species *Musca lancifer* Harris, [1780] are hereby set aside and the male specimen labelled 'England, Surrey: Bookham Common, Broadway North, 25.x.1969, A.C. & B. Pont' in the Department of Entomology, The Natural History Museum, London, is designated as the neotype;

(b) all previous fixations of type species for the nominal genus *Hydrophoria* Robineau-Desvoidy, 1830 are hereby set aside and *Musca lancifer* Harris, [1780] is designated as the type species.

(2) The name *Hydrophoria* Robineau-Desvoidy, 1830 (gender: feminine), type species by designation under the plenary powers in (1)(b) above *Musca lancifer* Harris, [1780], is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *lancifer* Harris, [1780], as published in the binomen *Musca lancifer* and as defined by the neotype designated in (1)(a) above (specific name of the type species of *Hydrophoria* Robineau-Desvoidy, 1830), is hereby placed on the Official List of Specific Names in Zoology.

**History of Case 2858**

An application for the designation of *Musca lancifer* Harris, [1780] as the type species of *Hydrophoria* Robineau-Desvoidy, 1830 was received from Dr Graham C.D. Griffiths (*University of Alberta, Edmonton, Alberta, Canada*) on 21 July 1992. After correspondence the case was published in BZN **51**: 28–30 (March 1994). Notice of the case was sent to appropriate journals.

Comments in support from Dr Curtis W. Sabrosky (*Medford, New Jersey, U.S.A.*) and from Dr Roger W. Crosskey (*The Natural History Museum, London, U.K.*) were published in BZN **51**: 258–259 (September 1994). Dr Crosskey supported the designation of *Musca lancifer* Harris, [1780] as the type species of *Hydrophoria* but noted that it was highly desirable to define the meaning of the name *lancifer* by a neotype. A specimen in the Natural History Museum, London, was proposed as the neotype by Mr D.M. Ackland (*c/o The University Museum, Oxford, U.K.*) and the author of the application (BZN **52**: 74; March 1995).

*Musca lancifer* was described and illustrated on p. 126, pl. 36, fig. 59 by Harris, [1780]. It was noted on the voting paper that the title page of Harris's *An exposition of English insects* is dated 1776 and a number of papers and catalogues have cited the work with this date. However, Pont & Michelsen (1982), following others, suggested that the work was published in five parts, each with 10 plates and corresponding text,

and (p. 26) set out the date for each part. Part 4, comprising pages 100 138 and plates 31–40, was given as '?1780'.

**Decision of the Commission**

On 1 September 1995 the members of the Commission were invited to vote on the proposals published in BZN **51**: 29–30 and **52**: 74. At the close of the voting period on 1 December 1995 the votes were as follows:

Affirmative votes — 23: Bayer, Bock, Bouchet, Cocks, Corliss, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Trjapitzin

Negative votes — 2: Cogger and Dupuis.

No votes were received from Ride and Uéno.

Cogger commented: 'While the purpose of the application is to maintain the long-standing sense of *Anthomyia conica* Wiedemann, 1817 as the type species of *Hydrophoria*, it is proposed to designate as type a senior subjective synonym (*Musca lancifer* Harris, [1780]). Should this synonymy be rejected by later workers on taxonomic grounds then the intention of the application would be overturned. This problem could be avoided either by using the plenary powers to designate *A. conica* as the type species of *Hydrophoria* or, if there is some special advantage (of which I am unaware) in having *Musca lancifer* as the type, then it would be better to designate the type specimen of *A. conica* in Vienna (noted by Ackland & Griffiths in BZN **52**: 74) as the neotype of *M. lancifer*, rather than the specimen in London proposed by Ackland & Griffiths, so that *A. conica* becomes a junior objective synonym of *M. lancifer*'. Dupuis commented: 'The concept of *Hydrophoria*, established since the time of Macquart (1835), Duponchel (1845) and Rondani (1866), as typified by *Anthomyia conica* Wiedemann, 1817, lasted 147 years. The synonymy of *Musca lancifer* Harris, [1780] with *A. conica* is a mere 13 years old (Pont & Michelson, 1982) and only 'most probable', hence the desirability of a neotype claimed by Crosskey (BZN **51**: 258–259). I think this neotype unnecessary. In my view *A. conica* should be chosen as the type species and *M. lancifer* should be placed on the Official Index'.

**Original references**

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

*Hydrophoria* Robineau-Desvoidy, 1830, *Mémoires présentés par divers savants à l'Académie Royale des Sciences de l'Institut de France*, (2)**2**: 503.

*lancifer*, *Musca*, Harris, [1780], *An exposition of English insects*, part 4, p. 126.

# OPINION 1828

## *Apis terrestris* Linnaeus, 1758, *A. muscorum* Linnaeus, 1758 and *A. lucorum* Linnaeus, 1761 (currently *Bombus terrestris*, *B. muscorum* and *B. lucorum*) and *Bombus humilis* Illiger, 1806 (Insecta, Hymenoptera): specific names conserved, and neotypes designated for *B. terrestris* and *B. muscorum*

**Keywords.** Nomenclature; taxonomy; Hymenoptera; bumble bees; *Bombus humilis*; *Bombus lucorum*; *Bombus muscorum*; *Bombus terrestris*.

**Ruling**

(1) Under the plenary powers all previous fixations of type specimens for the following nominal species are hereby set aside and the specimens cited are designated as the neotypes:

(a) *Apis terrestris* Linnaeus, 1758: the queen specimen with a red label reading 'NEOTYPE *Apis terrestris* L., 1758', a white label reading 'Upl. Rådmansö Västernäs 7.8.1970 leg. S. Erlandsson', a white label reading '*Bombus terrestris* (L.) A. Løken det.', and a blue label reading 'Naturhistoriska Riksmuseet Stockholm Loan 262/94';

(b) *Apis muscorum* Linnaeus, 1758: the queen specimen with a red label reading 'NEOTYPE *Apis muscorum* L., 1758', a white label reading 'Sk. Arkelstorp 5.7.1947 B.O. Landin', a white label reading '*Bombus muscorum* L., A. Løken det.', and a blue label reading 'Naturhistoriska Riksmuseet Stockholm Loan 268/94'.

(2) To the entry for *Apis terrestris* Linnaeus, 1758 on the Official List of Specific Names in Zoology is hereby added the endorsement that it is defined by the neotype designated in (1)(a) above.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *muscorum* Linnaeus, 1758, as published in the binomen *Apis muscorum* and as defined by the neotype designated in (1)(b) above;

(b) *lucorum* Linnaeus, 1761, as published in the binomen *Apis lucorum* and as defined by the neotype designated by Day (1979);

(c) *humilis* Illiger, 1806, as published in the binomen *Bombus humilis*.

**History of Case 2638**

An application for the conservation of the usage of the specific names of *A. terrestris* Linnaeus, 1758, *A. muscorum* Linnaeus, 1758, *A. lucorum* Linnaeus, 1761 and *Bombus humilis* Illiger, 1806 by the designation of neotypes for *A. terrestris* and *A. muscorum* was received from Dr Astrid Løken (*Hovseterveien, Oslo, Norway*), Dr Antti Pekkarinen (*University of Helsinki, Finland*) and Prof Pierre Rasmont (*Université de Mons-Hainaut, Mons, Belgium*) on 21 January 1988. After correspondence the case was published in BZN **51**: 232 236 (September 1994). Notice of the case was sent to appropriate journals.

A comment in support from Dr Hans Silfverberg (*Zoological Museum, Helsinki University, Finland*) was published in BZN **52**: 76 (March 1995).

The name *Bombus* Latreille, 1802, and that of its type species *Apis terrestris* Linnaeus, 1758, were placed on Official Lists in Opinion 220 (March 1954). However, the identity of the type material of *A. terrestris* was not then considered.

**Decision of the Commission**

On 1 September 1995 the members of the Commission were invited to vote on the proposals published in BZN **51**: 235. At the close of the voting period on 1 December 1995 the votes were as follows:

Affirmative votes — 25: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Trjapitzin

Negative votes — none.

No votes were received from Ride and Uéno.

Lehtinen commented: 'Lectotype designations for Linnaean species should not be allowed to upset the long usage of names'.

**Original references**

The following are the original references to the names placed on an Official List by the ruling given in the present Opinion:

*humilis*, *Bombus*, Illiger, 1806, *Magazin für Insektenkunde*, **5**: 171.
*lucorum*, *Apis*, Linnaeus, 1761, *Fauna Suecica*, Ed. 2, p. 425.
*muscorum*, *Apis*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 579.
*terrestris*, *Apis*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 578.

The following is the reference for the fixation of *Apis terrestris* Linnaeus. 1758 as the type species of the nominal genus *Bombus* Latreille, 1802:

**Latreille, P.A.** 1802. *Histoire naturelle des Fourmis* ..., p. 437.

The following is the reference for the designation of the lectotype of *Apis lucorum* Linnaeus, 1761:

**Day, M.C.** 1979. *Biological Journal of the Linnean Society* (London), **12**: 66.

# OPINION 1829

## MEGALODONTIDAE Konow, 1897 (Insecta, Hymenoptera): spelling emended to MEGALODONTESIDAE, so removing the homonymy with MEGALODONTIDAE Morris & Lycett, 1853 (Mollusca, Bivalvia)

**Keywords.** Nomenclature; taxonomy; Hymenoptera; Bivalvia; sawflies; MEGALODONTESIDAE; MEGALODONTIDAE; *Megalodon*; *Megalodontes*.

**Ruling**

(1) Under the plenary powers it is hereby ruled that for the purposes of Article 29 of the Code the stem of the generic name *Megalodontes* Latreille, 1802 (Insecta) is MEGALODONTES-.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:
   (a) *Megalodontes* Latreille, 1802 (gender: masculine), type species by monotypy *Tenthredo cephalotes* Fabricius, 1781 (Insecta);
   (b) *Megalodon* Sowerby, 1827 (gender: masculine), type species by monotypy *Megalodon cucullatus* Sowerby, 1827 (Mollusca).

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:
   (a) *cephalotes* Fabricius, 1781, as published in the binomen *Tenthredo cephalotes* (specific name of the type species of *Megalodontes* Latreille, 1802) (Insecta);
   (b) *cucullatus* Sowerby, 1827, as published in the binomen *Megalodon cucullatus* (specific name of the type species of *Megalodon* Sowerby, 1827) (Mollusca).

(4) The following names are hereby placed on the Official List of Family-Group Names in Zoology:
   (a) MEGALODONTESIDAE Konow, 1897, type genus *Megalodontes* Latreille, 1802 (spelling emended by the ruling in (1) above) (Insecta);
   (b) MEGALODONTIDAE Morris & Lycett, 1853, type genus *Megalodon* Sowerby, 1827 (Mollusca).

(5) The name MEGALODONTIDAE Konow, 1897 (Insecta) is hereby placed on the Official Index of Rejected and Invalid Family-Group Names in Zoology (spelling emended to MEGALODONTESIDAE in (1) above).

**History of Case 2866**

An application to remove the homonymy between the family-group names based on *Megalodontes* Latreille, 1802 (Insecta) and *Megalodon* Sowerby, 1827 (Mollusca) was received from Mr Neil D. Springate (*Muséum d'Histoire Naturelle, Genève, Switzerland*) on 10 November 1992. After correspondence the case was published in BZN **51**: 230-231 (September 1994). Notice of the case was sent to appropriate journals.

**Decision of the Commission**

On 1 September 1995 the members of the Commission were invited to vote on the proposals published in BZN **51**: 230–231. At the close of the voting period on 1 December 1995 the votes were as follows:

Affirmative votes — 23: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Trjapitzin

Negative votes — none.

Dupuis and Minelli abstained.

No votes were received from Ride and Uéno.

Dupuis, Lehtinen and Minelli commented that a ruling to give MEGALODONIDAE (from *Megalodon*) for the molluscan family and MEGALODONTIDAE (from *Megalodontes*) for the hymenopteran family would have been preferable.

**Original references**

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

*cephalotes*, *Tenthredo*, Fabricius, 1781, *Species Insectorum* ..., vol. 1, p. 408.

*cucullatus*, *Megalodon*, Sowerby, 1827, *The mineral conchology of Great Britain*, part 97 (vol. 6), p. 132.

*Megalodon* Sowerby, 1827, *The mineral conchology of Great Britain*, part 97 (vol. 6), p. 131.

*Megalodontes* Latreille, 1802, *Histoire naturelle, générale et particulière des crustacés et des insectes*, vol. 3, p. 302.

MEGALODONTESIDAE Konow, 1897, *Annalen des Königlichen-Kaiserlichen Naturhistorischen Hofmuseums*, (Wien), **12**: 1 (incorrectly spelled as MEGALODONTIDAE).

MEGALODONTIDAE Konow, 1897, *Annalen des Königlichen-Kaiserlichen Naturhistorischen Hofmuseums*, (Wien), **12**: 1 (an incorrect original spelling of MEGALODONTESIDAE).

MEGALODONTIDAE Morris & Lycett, 1853, *A monograph of the Mollusca from the Great Oolite, chiefly from Minchinhampton and the coast of Yorkshire*, part 2, p. 78.

# OPINION 1830

## CAECILIIDAE Kolbe, 1880 (Insecta, Psocoptera): spelling emended to CAECILIUSIDAE, so removing the homonymy with CAECILIIDAE Rafinesque, 1814 (Amphibia, Gymnophiona)

**Keywords.** Nomenclature; taxonomy; Insecta; Psocoptera; Amphibia; Gymnophiona; CAECILIAIDAE; CAECILIIDAE; CAECILIUSIDAE; *Caecilia*; *Caecilius*.

**Ruling**

(1) Under the plenary powers:
  (a) paragraphs (1), (4) and (5) of the ruling in Opinion 1462 are hereby revoked;
  (b) it is hereby ruled that for the purposes of Article 29 of the Code the stem of the generic name *Caecilius* Curtis, 1837 (Insecta) is CAECILIUS-.

(2) The following names are hereby placed on the Official List of Family-Group Names in Zoology:
  (a) CAECILIIDAE Rafinesque, 1814, type genus *Caecilia* Linnaeus, 1758 (Amphibia);
  (b) CAECILIUSIDAE Kolbe, 1880, type genus *Caecilius* Curtis, 1837 (spelling emended by the ruling in (1)(b) above) (Insecta).

(3) The following names are hereby placed on the Official Index of Rejected and Invalid Family-Group Names in Zoology:
  (a) CAECILIIDAE Kolbe, 1880 (an incorrect original spelling of CAECILIUSIDAE) (Insecta);
  (b) CAECILIAIDAE Rafinesque, 1814 (an emended spelling of CAECILIIDAE, adopted and placed on the Official List in Opinion 1462 but now deleted) (Amphibia);
  (c) CECILINIA Rafinesque, 1814 (an incorrect original spelling of CAECILIIDAE) (Amphibia).

**History of Case 2936**

An application to remove the homonymy between the family-group names based on *Caecilia* Linnaeus, 1758 (Amphibia) and *Caecilius* Curtis, 1837 (Insecta) by emending the spelling of the insect family-group name to CAECILIUSIDAE, so revoking that part of Opinion 1462 (December 1987) dealing with family-group names, was received from Prof M.H. Wake (*University of California, Berkeley, California, U.S.A.*), Prof A. Dubois (*Muséum national d'Histoire naturelle, Paris, France*), Dr D.R. Frost (*American Museum of Natural History, New York, N.Y., U.S.A.*) and Drs T.E. Moore & R.A. Nussbaum (*Museum of Zoology, University of Michigan, Ann Arbor, Michigan, U.S.A.*) on 14 November 1990. After correspondence the case was published in BZN **51**: 237–239 (September 1994). Notice of the case was sent to appropriate journals.

A comment in 'tentative support' from Dr Mark Wilkinson (*University of Bristol, Bristol, U.K.*) was received during the voting period.

It was noted on the voting paper that, as pointed out in the application, all the arguments put forward when this case of homonymy was considered in 1980–1987

were in favour of retaining the earlier and important amphibian homonym CAECILIIDAE and emending the psocopteran family name based on *Caecilius*. The only objection that had been raised to the name CAECILIUSIDAE was that it was not euphonious.

The generic names *Caecilia* Linnaeus, 1758 and *Caecilius* Curtis, 1837, and the valid names of their type species, *Caecilia tentaculata* Linnaeus, 1758 and *Psocus fuscopterus* Latreille, 1799 repectively, were placed on Official Lists in Opinion 1462 (December 1987).

**Decision of the Commission**

On 1 September 1995 the members of the Commission were invited to vote on the proposals published in BZN **51**: 237–239. At the close of the voting period on 1 December 1995 the votes were as follows:

Affirmative votes — 21: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Hahn, Halvorsen, Heppell, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Trjapitzin

Negative votes — 3: Dupuis, Holthuis and Kabata.

Lehtinen abstained.

No votes were received from Ride and Uéno.

Lehtinen commented: 'This homonymy problem was only recently voted on. If changes to Opinion 1462 (1987) really are necessary they are best discussed when enough information on the drawbacks of the decision is available. The new application seems to me to be argued mainly on personal grounds and sentiments'. Štys commented: 'After long hesitation I vote for the proposal. It should be made clear that the previous Opinion was based on a proposal which did not serve best the stability of nomenclature, and that the Commission is now correcting its own previous wrong judgement. The psocopteran genus *Caecilius* Curtis, 1837 is described as 'relatively obscure' in para. 7(a) of the application. This is only because the derived family-group name is less well known in comparison with the amphibian name. However, the psocopteran group up to now known as CAECILIIDAE is cited in comprehensive treatments of the Psocoptera, is well known to all systematic entomologists, and is characterized and/or listed in all textbooks and similar comprehensive treatises on systematic entomology. We have to take into account frequency of usage of names but we must treat taxa as equal'.

**Original references**

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

CAECILIAIDAE Rafinesque, 1814, *Specchio delle scienze o Giornale Enciclopedico di Sicilia*, **2**: 104 (an emended spelling of CAECILIIDAE deleted from the Official List and placed on the Index in this Opinion).

CAECILIIDAE Kolbe, 1880, *Stettiner Entomologische Zeitung*, **41**: 183 (an incorrect original spelling of CAECILIUSIDAE).

CAECILIIDAE Rafinesque, 1814, *Specchio delle scienze o Giornale Enciclopedico di Sicilia*, **2**: 104.

CAECILIUSIDAE Kolbe, 1880, *Stettiner Entomologische Zeitung*, **41**: 183 (incorrectly spelled as CAECILIIDAE).

CECILINIA Rafinesque, 1814, *Specchio delle scienze o Giornale Enciclopedico di Sicilia*, **2**: 104 (an incorrect original spelling of CAECILIIDAE).

# OPINION 1831

## *Plesiosaurus rugosus* Owen, 1840 (currently *Eretmosaurus rugosus*; Reptilia, Plesiosauria): neotype designated

**Keywords.** Nomenclature; taxonomy; Reptilia; Plesiosauria; *Eretmosaurus*.

**Ruling**

(1) Under the plenary powers all previous fixations of type specimens for the nominal species *Plesiosaurus rugosus* Owen, 1840 are hereby set aside and the postcranial skeleton, catalogue no. BMNH 14435, in the Department of Palaeontology, The Natural History Museum, London, is designated as the neotype.

(2) The name *Eretmosaurus* Seeley, 1874 (gender: masculine), type species by monotypy *Plesiosaurus rugosus* Owen, 1840, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *rugosus* Owen, 1840, as published in the binomen *Plesiosaurus rugosus* and as defined by the neotype designated in (1) above (specific name of the type species of *Eretmosaurus* Seeley, 1874), is hereby placed on the Official List of Specific Names in Zoology.

**History of Case 2895**

An application for the conservation of the accustomed usage of the specific name of *Plesiosaurus rugosus* Owen, 1840 by the designation of a neotype was received from Dr David S. Brown (*The Dental School, Newcastle upon Tyne, U.K.*) and Dr Nathalie Bardet (*Laboratoire de Paléontologie des Vertébrés, Université Pierre et Marie Curie, Paris, France*) on 18 May 1993. After correspondence the case was published in BZN **51**: 247–249 (September 1994). Notice of the case was sent to appropriate journals.

**Decision of the Commission**

On 1 September 1995 the members of the Commission were invited to vote on the proposals published in BZN **51**: 248. At the close of the voting period on 1 December 1995 the votes were as follows:

Affirmative votes — 25: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Trjapitzin

Negative votes — none.

No votes were received from Ride and Uéno.

**Original references**

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

*Eretmosaurus* Seeley, 1874, *Quarterly Journal of the Geological Society of London*, **30**: 445.

*rugosus*, *Plesiosaurus*, Owen, 1840, *Reports of the British Association for the Advancement of Science*, **9**: 82.

The following is the reference for the fixation of *Plesiosaurus rugosus* Owen, 1840 as the type species of the nominal genus *Eretmosaurus* Seeley, 1874:
**Seeley, H.G.** 1874. *Quarterly Journal of the Geological Society of London*, **30**: 445.

# OPINION 1832

## *Coluber poecilogyrus* Wied-Neuwied, [1824] (currently *Liophis poecilogyrus*) (Reptilia, Serpentes): specific name conserved

**Keywords.** Nomenclature; taxonomy; Reptilia; Serpentes; snakes; *Liophis poecilogyrus*.

**Ruling**

(1) Under the plenary powers the following specific names are hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
  (a) *m-nigrum* Raddi, 1820, as published in the binomen *Coluber m-nigrum*;
  (b) *alternans* Lichtenstein, 1823, as published in the binomen *Coluber alternans*;
  (c) *forsteri* Wagler in Spix, 1824, as published in the binomen *Natrix forsteri*.

(2) The name *poecilogyrus* Wied-Neuwied, [1824], as published in the binomen *Coluber poecilogyrus*, is hereby placed on the Official List of Specific Names in Zoology.

(3) The following names are hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology:
  (a) *m-nigrum* Raddi, 1820, as published in the binomen *Coluber m-nigrum* and as suppressed in (1)(a) above;
  (b) *alternans* Lichtenstein, 1823, as published in the binomen *Coluber alternans* and as suppressed in (1)(b) above;
  (c) *forsteri* Wagler in Spix, 1824, as published in the binomen *Natrix forsteri* and as suppressed in (1)(c) above;
  (d) *doliatus* Wied-Neuwied, [1824], as published in the binomen *Coluber doliatus* (a junior primary homonym of *Coluber doliatus* Linnaeus, 1766).

**History of Case 2875**

An application for the conservation of the specific name of *Coluber poecilogyrus* Wied-Neuwied, [1824] was received from Prof Hobart M. Smith (*University of Colorado, Boulder, Colorado, U.S.A.*), Dr James R. Dixon (*Texas A & M University, Texas, U.S.A.*) and Dr Van Wallach (*Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, U.S.A.*) on 1 February 1993. After correspondence the case was published in BZN **51**: 250–252 (September 1994). Notice of the case was sent to appropriate journals.

A comment in support from Prof Laurie J. Vitt (*Oklahoma Museum of Natural History, University of Oklahoma, Norman, Oklahoma, U.S.A.*) was published in BZN **52**: 77–78 (March 1995). A note of further supportive comments from Prof Edwin L. Bell (*Albright College, Reading, Pennsylvania, U.S.A.*) and from Prof Kenneth L. Williams (*Northwestern State University of Louisiana, Natchitoches, Louisiana, U.S.A.*) was published at the same time.

It was noted on the voting paper that the specific name of *Coluber doliatus* Wied-Neuwied, [1824] (pl. [44], fig. 3), which is considered to be a synonym of *C. poecilogyrus*, was published on the same page and the same plate as the latter

(pl. [44], fig. 2; cf. para. 4 of the application). *C. doliatus* Wied-Neuwied is a junior primary homonym of *C. doliatus* Linnaeus, 1766 and it was proposed that it be placed on the Official Index in addition to the names recorded in para. (3)(a) -(c) on BZN **51**: 251.

**Decision of the Commission**

On 1 September 1995 the members of the Commission were invited to vote on the proposals published in BZN **51**: 251. At the close of the voting period on 1 December 1995 the votes were as follows:

Affirmative votes — 23: Bayer, Bock, Cocks, Cogger, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys (part), Trjapitzin

Negative votes — 2: Bouchet and Lehtinen.

No votes were received from Ride and Uéno.

Bouchet commented: 'The application (para. 6) refers to 'a list of ten works of the last 50 years which have used the binomen *Liophis poecilogyrus*'. In my view this does not qualify as a widespread usage and priority should apply'. Štys voted in favour of conserving the name *Coluber poecilogyrus* but against placing *Coluber doliatus* Wied-Neuwied, [1824] on the Official Index.

**Original references**

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

*alternans*, *Coluber*, Lichtenstein, 1823, *Verzeichniss der Doubletten des zoologischen Museums der Königl. Universität zu Berlin nebst Beschreibung vieler bisher unbekannten Arten von Säugethieren, Vögeln, Amphibien und Fischen*, p. 104.

*doliatus*, *Coluber*, Wied-Neuwied, [1824], *Abbildungen zur Naturgeschichte Brasiliens*, Heft 8, pl. 44, fig. 3.

*forsteri*, *Natrix*, Wagler, 1824, *in* Spix, J.B. von, *Serpentum Brasiliensium species novae* ... p. 16.

*m-nigrum*, *Coluber*, Raddi, 1820, *Atti della Società Italiana di Scienze Naturali di Modena*, **18**: 338.

*poecilogyrus*, *Coluber*, Wied-Neuwied, [1824], *Abbildungen zur Naturgeschichte Brasiliens*, Heft 8, pl. 44, fig. 2.

# OPINION 1833

## *Psittacus banksii* Latham, 1790 and *P. lathami* Temminck, 1807 (currently *Calyptorhynchus banksii* and *C. lathami*; Aves, Psittaciformes): specific names conserved

**Keywords.** Nomenclature; taxonomy; Aves; Psittaciformes; cockatoos; *Calyptorhynchus banksii*; *Calyptorhynchus lathami*.

**Ruling**

(1) Under the plenary powers the following specific names are hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
  (a) *magnificus* Shaw in Shaw & Nodder, 1790, as published in the binomen *Psittacus magnificus*;
  (b) *flavicollo* Kerr, 1792, as published in the trinomen *Psittacus banksii flavicollo*.

(2) The following names are hereby placed on the Official List of Specific Names in Zoology:
  (a) *banksii* Latham, 1790, as published in the binomen *Psittacus banksii*;
  (b) *lathami* Temminck, 1807, as published in the binomen *Psittacus lathami*.

(3) The following names are hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology:
  (a) *magnificus* Shaw in Shaw & Nodder, 1790, as published in the binomen *Psittacus magnificus* and as suppressed in (1)(a) above;
  (b) *flavicollo* Kerr, 1792, as published in the trinomen *Psittacus banksii flavicollo* and as suppressed in (1)(b) above.

**History of Case 2856**

An application for the conservation of the specific names of *Psittacus banksii* Latham, 1790 and *P. lathami* Temminck, 1807 was received from Dr Richard Schodde (*Australian National Wildlife Collection, CSIRO, Lyneham, Australia*) and Prof Walter J. Bock (*Columbia University, New York, N.Y., U.S.A.*) on 10 July 1992. After correspondence the case was published in BZN **51**: 253–255 (September 1994). Notice of the case was sent to appropriate journals.

**Decision of the Commission**

On 1 September 1995 the members of the Commission were invited to vote on the proposals published in BZN **51**: 254–255. At the close of the voting period on 1 December 1995 the votes were as follows:

Affirmative votes — 24: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Starobogatov, Štys, Trjapitzin

Negative votes — none.

No votes were received from Ride, Schuster and Uéno.

## Original references

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

*banksii*, *Psittacus*, Latham, 1790, *Index Ornithologicus, sive systema ornithologiae* ..., vol. 1, p. 107.

*flavicollo*, *Psittacus banksii*, Kerr, 1792, *The animal kingdom, or zoological system, of the celebrated Sir Charles Linnaeus*, vol. 1, part 2, p. 586.

*lathami*, *Psittacus*, Temminck, 1807, *Catalogue systématique du cabinet d'ornithologie et de la collection de quadrumanes de Crd. Jb. Temminck*, p. 21.

*magnificus*, *Psittacus*, Shaw, 1790, *in* Shaw, G. & Nodder, F.P., *The naturalist's miscellany*, vol. 2, p. 50.

## INFORMATION AND INSTRUCTIONS FOR AUTHORS

The following notes are primarily for those preparing applications; other authors should comply with the relevant sections. Applications should be prepared in the format of recent parts of the Bulletin; manuscripts not prepared in accordance with these guidelines may be returned.

*General.* Applications are requests to the Commission to set aside or modify the Code's provisions as they relate to a particular name or group of names when this appears to be in the interest of stability of nomenclature. Authors submitting cases should regard themselves as acting on behalf of the zoological community and the Commission will treat applications on this basis. Applicants are advised to discuss their cases with other workers in the same field before submitting applications, so that they are aware of any wider implications and the likely reactions of other zoologists.

*Text.* Typed in double spacing, this should consist of numbered paragraphs setting out the details of the case and leading to a final paragraph of formal proposals. Text references should give dates and page numbers in parentheses, e.g. 'Daudin (1800, p. 39) described . . .'. The Abstract will be prepared by the Secretariat.

*References.* These should be given for all authors cited. Where possible, ten or more relatively recent references should be given illustrating the usage of names which are to be conserved or given precedence over older names. The title of periodicals should be in full and be underlined; numbers of volumes, parts, etc. should be in arabic figures, separated by a colon from page numbers. Book titles should be underlined and followed by the number of pages and plates, the publisher and place of publication.

*Submission of Application.* Two copies should be sent to: The Executive Secretary, The International Commission on Zoological Nomenclature, c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. It would help to reduce the time that it takes to process the large number of applications received if the typescript could be accompanied by a disk with copy in IBM PC compatible format, preferably in ASCII text. It would also be helpful if applications were accompanied by photocopies of relevant pages of the main references where this is possible.

The Commission's Secretariat is very willing to advise on all aspects of the formulation of an application.

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BULLETIN OF ZOOLOGICAL NOMENCLATURE

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## Notices

(a) *Invitation to comment.* The Commission is authorised to vote on applications published in the *Bulletin of Zoological Nomenclature* six months after their publication but this period is normally extended to enable comments to be submitted. Any zoologist who wishes to comment on any of the applications is invited to send his contribution to the Executive Secretary of the Commission as quickly as possible.

(b) *Invitation to contribute general articles.* At present the *Bulletin* comprises mainly applications concerning names of particular animals or groups of animals, resulting comments and the Commission's eventual rulings (Opinions). Proposed amendments to the Code are also published for discussion.

Articles or notes of a more general nature are actively welcomed provided that they raise nomenclatural issues, although they may well deal with taxonomic matters for illustrative purposes. It should be the aim of such contributions to interest an audience wider than some small group of specialists.

(c) *Receipt of new applications.* The following new applications have been received since going to press for volume 53, part 1 (published on 29 March 1996). Under Article 80 of the Code, existing usage is to be maintained until the ruling of the Commission is published.

(1) *Strombidium gyrans* Stokes, 1887 (currently *Strobilidium gyrans*; Ciliophora, Oligotrichida): proposed conservation of the specific name. (Case 3011). C.W. Heckman.

(2) *Eutaenia sirtalis tetrataenia* Cope *in* Yarrow, 1875 and *Coluber infernalis* Blainville, 1835 (currently *Thamnophis s. tetrataenia* and *T. s. infernalis*; Reptilia, Serpentes): proposed conservation of usage of the subspecific names by the designation of a neotype for *T. s. infernalis*. (Case 3012). S.J. Barry & M.R. Jennings.

(3) *Helix* (*Helicella*) *draparnaudi* Beck, 1837 (currently *Oxychilus draparnaudi*; Mollusca, Gastropoda): proposed conservation of the specific name. (Case 3013). G. Manganelli & F. Giusti.

(4) *Spondylus princeps* Broderip, 1833 (Mollusca, Bivalvia): proposed conservation of the specific name. (Case 3014). C. Skoglund.

(5) *Gladiolites geinitzianus* Barrande, 1850 (currently *Retiolites geinitzianus*; Graptolithina): proposed designation of a neotype. (Case 3016). D.K. Loydell & P. Štorch.

(6) *Pseudobiotus* Nelson, 1980 (Tardigrada): proposed designation of *P. kathmanae* Nelson, 1996 as the type species. (Case 3017). N.J. Marley, R. Bertolani & D.R. Nelson.

(d) *Rulings of the Commission.* Each Opinion published in the *Bulletin* constitutes an official ruling of the International Commission on Zoological Nomenclature, by virtue of the votes recorded, and comes into force on the day of publication of the *Bulletin.*

## Towards Stability in the Names of Animals

The International Commission on Zoological Nomenclature was founded on 18 September 1895. In recognition of its Centenary a history of the development of nomenclature since the 18th century and of the Commission has been published entitled '*Towards Stability in the Names of Animals — a History of the International Commission on Zoological Nomenclature 1895–1995*' (ISBN 0 85301 005 6). It is 104 pages (250 × 174 mm) with 18 full-page illustrations, 14 being of eminent zoologists who played a crucial part in the evolution of the system of animal nomenclature as universally accepted today. The book contains a list of all the Commissioners from 1895 to the present. The main text was written by R.V. Melville (former Secretary of the Commission) and has been completed and updated following his death.

Copies may be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. *or* A.A.Z.N., Attn. Dr Al Norrbom, c/o USDA Systematic Entomology Laboratory, MRC-168, National Museum of Natural History, Washington D.C. 20560, U.S.A.

The cost is £30 or $50 (including surface postage); members of the American and European Associations for Zoological Nomenclature are offered the reduced price of £20 or $35. Payment should accompany orders.

## Official Lists and Indexes of Names and Works in Zoology — Second Supplement to 1990

*The Official Lists and Indexes of Names and Works in Zoology* was published in 1987. This book gives details of all the names and works on which the Commission has ruled since it was set up in 1895, up to 1985; there are about 9,900 entries.

Copies can be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. *or* A.A.Z.N., Attn. Dr Al Norrbom, c/o USDA Systematic Entomology Laboratory, MRC-168, National Museum of Natural History, Washington D.C. 20560, U.S.A. The cost is £60 or $110, but members of the American Association for Zoological Nomenclature or the European Association for Zoological Nomenclature are offered the reduced price of £40 or $75; payment should accompany orders.

In the five years 1986–1990, 946 names and five works were added to the Official Lists and Official Indexes. A supplement has been prepared giving these additional entries, together with some amendments and updatings to entries in the 1987 volume. Copies can be obtained without charge from either of the above addresses.

## The International Code of Zoological Nomenclature

The Third Edition (published 1985) supersedes all earlier versions and incorporates many changes.

Copies can be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. *or* A.A.Z.N., Attn. Dr Al Norrbom, c/o USDA Systematic Entomology Laboratory, MRC-168, National Museum of Natural History, Washington D.C. 20560, U.S.A. The cost is £19 or $35, but members of the American Association for Zoological Nomenclature or the European Association for Zoological Nomenclature are offered the reduced price of £15 or $29; payment should accompany orders.

## International Congress of Systematic and Evolutionary Biology, Budapest, 17–24 August 1996

This Congress (ICSEB V) is being hosted by the Hungarian Academy of Sciences at the Education Centre, Budapest. Details of the numerous symposia and other activities may be obtained from the programme co-ordinator: Dr István Molnár, *Department of Genetics, Eötvös University, Múzeum krt 4/A, H-1088 Budapest, Hungary* (fax + 36 1 266 2694, e-mail molnari@ludens.elte.hu).

The symposia will include one for the discussion of the proposed fourth edition of the *International Code of Zoological Nomenclature* (see BZN **52**: 120, 121–125). All zoologists attending ICSEB V will be able to take part in elections to fill vacancies on the International Commission on Zoological Nomenclature.

## The European Association for Zoological Nomenclature

The European Association for Zoological Nomenclature has been established to facilitate liaison between European zoologists and the Commission, and to support the Commission's work. Members will receive a yearly Newsletter with information on the activities of the Association and Commission, and will be able to buy the *Code* and the *Official Lists and Indexes* at substantial discounts.

The Association's President is Dr V. Mahnert (Switzerland), the Vice-President Dr I.M. Kerzhner (Russia), the Secretary Dr E. Macpherson (Spain) and the Treasurer Dr M.A. Alonso-Zarazaga (Spain). Other members of the Inaugural Council are Dr H.M. André (Belgium), Dr J.-P. Hugot (France) and Dr C. Nielsen (Denmark). Membership of the Association is open to all European zoologists; further details can be obtained from Dr M.A. Alonso-Zarazaga, Museo Nacional de Ciencias Naturales, José Gutiérrez Abascal 2, 28006 Madrid, Spain.

## Discussion Draft of the Fourth Edition of the *International Code of Zoological Nomenclature*: Comments

(See also BZN **52**: 228–233, 294–302; **53**: 6–17)

The following are amongst the comments which have been received, all of which (whether published in the *Bulletin* or not) have been forwarded to the Editorial Committee and are being taken into full consideration. A revised Draft will be discussed at a Workshop at the International Congress of Systematic and Evolutionary Biology (ICSEB) in Budapest (17–24 August 1996).

### (1) David G. Reid

*Department of Zoology, The Natural History Museum, London SW7 5BD, U.K.*

### Klaus Sattler & Roger W. Crosskey

*Department of Entomology, The Natural History Museum, London SW7 5BD, U.K.*

We would like to draw attention to a significant shift in emphasis in the Discussion Draft, relating to the precedence of 'established usage' over the identity of name-bearing types under certain circumstances (see Article 61), and to relaxation of the rules concerning the establishment and status of neotypes (Article 75). In the following comments, we have been guided by two practical considerations: first, that long-term nomenclatural stability is dependent upon stability and continuity of the existing, widely-accepted, set of rules; second, that the burden of applications to the Commission for rulings on specific cases should be as light as possible. In addition, we hold firmly to the philosophical principle that 'the fixation of the name-bearing type of a nominal taxon provides the objective standard of reference for the application of the name it bears' and 'once fixed, name-bearing types are stable and provide objective continuity in the application of names' (Article 61a). True long-term stability of nomenclature can only be achieved by rigorous maintenance of types as the objective standards of reference.

In the proposed Fourth Edition, a new section (e) has been added to the existing Article 61, to the effect that, if the identity of a name-bearing type specimen is found to conflict with usage of a widely accepted name, then existing usage is to be maintained, a replacement name-bearing type (presumably a neotype) is to be nominated, and the case is to be referred to the Commission for ratification. This contrasts with the existing Code, under which the identity of the type specimen is the ultimate arbiter of the application of the name it bears (Article 61a); in this there are no rules or recommendations covering misidentifications but the Commission can use its plenary power to change a name-bearing type, if required in the interests of stability (Article 79a).

The consequences of the proposed change will be insidious and potentially far-reaching. It reduces the incentive for confirmation of the identity of type

specimens during revisory taxonomic studies: it is sufficient merely to establish the existing usage of a name. With the passage of time, such non-rigorous practice will lead to the accumulation of errors, and when these are discovered the workload of the Commission will be increased. The concept of stability must be viewed in the long term; it should not be confused with short-term convenience. Thus, while retention of misapplied names may be convenient, the result will be a break in historical continuity, and a devaluation of the status of type specimens. Such a devaluation contradicts the very purpose of typification that is so well expressed in Article 61a. Furthermore, replacement type specimens may be separated from the material of the original author, adding to the dispersal of type material and making future comparative work still more difficult. In the new Article 61e, 'established usage' is defined as the use of a name by at least 5 different authors in at least 10 publications during the preceding 50 years. In underworked groups, or where a group has been worked by a single 'school' of taxonomists, such criteria have little meaning. In an extreme case, it could be envisaged that in an infrequently studied group a new author could dispense with the examination of historical literature and existing type specimens; the taxonomy could be entirely redone and the necessary number of publications required to establish usage of the new nomenclature could soon be achieved by a small group of researchers. While the result would undoubtedly be convenient for the workers involved, it would unquestionably be contrary to the interests of long-term stability. Poor taxonomic practice of this kind can only be discouraged by strict adherence to the rule of type specimens as unchanging standards of reference.

Similarly, we notice that changes to the rules on the establishment of neotypes have been made in the Discussion Draft. The proposed new version of Article 75j covers the rediscovery of a name-bearing type after the designation of a neotype and specifies that, if the two are considered conspecific, the neotype is to retain its status as the name-bearing type, while otherwise the case is to be referred to the Commission. In contrast, in the existing Code (Article 75h) all such cases are to be referred to the Commission, regardless of subjective assessments of taxonomic identity. The proposed new version is clearly a licence to erect neotypes without thorough search for existing types, and again devalues the status of name-bearing types by encouraging poor taxonomic practice. There is also the added element of subjectivity in the assessment of conspecificity. It is an important principle of both the existing and proposed versions of the Code that neotypes are 'to be designated only in connection with revisory work, and only in exceptional circumstances when a neotype is necessary in the interests of stability of nomenclature' (Article 75b). The new Sections 75f (previously Recommendation 75E) and 75j of Article 75 could be misused to justify the disregard of existing historical material and the creation of unnecessary neotypes. The inevitable subsequent controversies would add to the workload of the Commission.

In summary, therefore, we strongly advocate the removal of the proposed Articles 61e and 61f from the Fourth Edition of the Code, the return of Article 75f to a Recommendation, and the replacement of Article 75j by its existing wording (Article 75h in the Third Edition).

(2) Rolf G. Oberprieler

*Plant Protection Research Institute, Agricultural Research Council, Private Bag X134, Pretoria 0001, South Africa*

The current Code distinguishes (Articles 45f and 45g) between those pre-1961 infraspecific (but not expressly subspecific) names originally published as 'varieties' or 'forms' and all others; in general the former are treated as subspecific, and hence available, but the latter are not. However, in the Lepidoptera and many other groups of insects (and no doubt other animals) it is abundantly clear that authors often did not use the category 'subspecies' in their descriptive taxonomy. Instead they used a loose range of terms (varieties, variations, forms, aberrations, morphs, natios, etc.) for infraspecific entities. Which term was used often depended on personal, national, linguistic or other factors rather than on clear definitions or concepts. Unless published in addition to a trinomen such names were not unambiguously established as *infrasubspecific*, but only as *infraspecific*. Many of the entities denoted by these names have long been treated as valid subspecies or even species, and to change their names on the basis of technicalities of original terminology or futile judgements of the author's concept would have grave consequences for stability.

I would like to suggest that Articles 45f and 45g be simplified so that *all* names published before 1961 as the final epithet in a trinomen are deemed to be subspecific and hence available, unless expressly stated otherwise by the author. The *availability* of names is the concern of nomenclature; their *validity* is another matter and in the realm of taxonomy.

(3) Charles D. Michener

*Snow Entomological Museum, The University of Kansas, Lawrence, Kansas 66045, U.S.A.*

In general I am strongly in favor of the changes in the Discussion Draft, but I have some comments.

I am not certain that the requirement (Article 16b) that new names must be accompanied by a diagnosis in a language using the Latin alphabet is practicable. Might it not not tend to cause Chinese or Russian authors (for example) to deviate from the Code, leading to multiple nomenclatures? Zoologists from such countries should be consulted as to their views of the long-term effect of the proposed wording.

The lack of gender of generic names (Article 30) is very desirable, but neither of the alternatives offered in Article 31b is satisfactory. The first is the return to the original ending of an adjectival specific epithet, but this would cause many changes and is a bad idea, contrary to the spirit of minimal changes and maximal stability characteristic of other proposed rule changes. The second is the use of the currently accepted ending until a new combination is used, at which time the ending would revert to the original; this leaves potential for changes in endings, essentially for ever. We need the following provision: After 1997, the ending of a species-group epithet is to remain as it is in an existing combination, even when the species is transferred to another nominal genus. If difference in taxonomic opinion had led to a species being placed in different genera in the five[?] years prior to 1998, such that the ending of the specific

epithet was not constant, then the ending to be accepted is that which is first in alphabetical order (e.g. the order *-a*, *-um*, *-us*).

## (4) L.B. Holthuis

*Nationaal Natuurhistorisch Museum, Postbus 9157, 2300 RA Leiden, The Netherlands*

I have a number of comments on the Discussion Draft.

*Article 5a.* I gladly concur with the (re-)introduction of the term 'epithet'; it is clear and unambiguous, whereas 'specific name' is often confused with 'species name'.

*Articles 8e and 11b.* It is a good idea to make *Zoological Record* a kind of 'official list' of new names, as it is already the source consulted by all zoologists wanting to find out what species have been recently described. Also, the great increase in publications and the ease with which articles can now be published makes it imperative that there be a single source for reference. The objection that the *Record* is incomplete is true, but this is mainly the fault of authors. Article 8e will be a powerful incentive to authors to notify new names, and so will greatly facilitate the work of taxonomists. However, the deadline should not be five years after the publication of the new name, but five years after the publication of the volume of *Zoological Record* dealing with the relevant year (it would be helpful if each volume of the *Record* were made to cover a calendar year).

*Article 16a, e.* The idea behind these provisions is sound: we have to eliminate from availability names published by authors who did not intend to describe new taxa. The botanists have done this by requiring Latin diagnoses, but the simple requirements of Article 16e are adequate. The proposal (Article 16a) that a new taxon must be compared with a named taxon of equal rank is nonsense. What about a new genus described with a single (new) species? There are no species within the genus with which the new species can be compared. The idea should be at most a Recommendation; for the Article itself the words 'characters that purport to differentiate the new nominal taxon from other taxa' are sufficient. I hope that the Code will not require a diagnosis (a term not defined in the Glossary of the present Code) as well as a description!

*Article 16c, e(ii).* It would be pedantic to require that the name of a new family-group nominal taxon 'must be accompanied by a statement in words designating the type genus' (Article 16c), or that an otherwise excellently defined new species-group taxon must be accompanied 'by the designation of a holotype, or syntypes' (Article 16e(ii)). The present rules have caused no difficulty at all. Why make the Code more complicated? It is bad enough as it is.

*Articles 23j and 35e.* I am against this limitation of adherence to priority, which I believe should be strictly followed (with the proviso that the Commission can make exceptions in special cases).

*Article 29.* I am against 'flexibility' in the treatment of family-group names, the derivation of which should follow correct grammar except when a change (by the Commission) is necessary to remove homonymy.

*Articles 30, 31 and 32.* The abandonment of gender of generic names should be made retroactive to 1758, and the original spellings of *all* names should be used

(even if grammatically incorrect or showing typographical or clerical error). This courageous step would be a great simplification of the Code.

*Article 41a.* This is very obscurely worded, but after reading it several times I believe that it is intended that, if a genus is based on a misidentified type genus [who is to prove that?], then the biological species involved has automatically to be taken as the type species. This is confusing taxonomy with nomenclature. The correct 'automatic' solution is to accept the nominal species fixed as type by the author; this is in accord with Article 61a(iii). If this causes confusion then the case should be referred to the Commission. If the biological species is to be taken, authors (even if they agree that there was a misidentification) may differ in their opinion about the actual identity of the material.

*Article 55.* These provisions for removing homonymy between family-group names are far too complicated! The present rules are adequate.

*Article 74a(ii)(5).* Why should it be compulsory to give a 'reason' in order for a lectotype designation to be valid? This is another unnecessary provision.

My general impressions of the changes proposed in the draft are: (1) with the laudable aim of supporting usage, vague wordings which may be interpreted differently by zoologists ('universally', 'widely', 'interested zoologists', 'substantial agreement', etc.) are proposed; (2) the draft tries to regulate too much and creates a number of quite unnecessary difficulties for zoologists working in taxonomy — instead of simplifying the Code (already too complicated) the draft will increase confusion.

## (5) M. Judson

*Muséum national d'Histoire naturelle, 61 rue de Buffon, 75005 Paris, France*

The rules of zoological nomenclature only work because there is a consensus of opinion that they should be followed. No Code can be imposed.

As joint Editor of a largely taxonomic journal, I am worried that some may find the new proposals sufficiently radical to feel that they would no longer be bound by the Code. It would be disastrous if the community were to split into two camps, those who adhered to the new Code and those who did not. I have in mind particularly the abandonment of grammatical gender agreement, the acceptance of misspellings, and the non-availability of names not registered in the *Zoological Record* within five years.

I see few advantages in the proposed modifications, apart from the welcome tightening of rules on type designations. As they stand, the proposals often seem to run counter to their stated aims. I hope the members of the Commission will carefully consider whether they are acting in accord with the wishes of the majority.

## (6) Dietrich Kadolsky

*The Limes, 66 Heathhurst Road, Sanderstead, Surrey CR2 0BA, U.K.*

The draft contains major departures from the present Code, and hence is likely to cause name changes. In addition to this, some of the proposals (such as the requirement that new names must appear within five years in *Zoological Record*, and

the statement that generic names have no gender) will mean that the Code will not command respect and will be taken less seriously: prevailing practice will overrule it.

I have given the Code Editorial Committee a considerable number of detailed comments on the draft. I have some particular remarks on the proposed 'Lists of Available and Potentially Valid Names' (Articles 77 and 78). It goes against common sense and the theme of all previous Codes that names should become unavailable simply by omission from a List. Mere omission, which may be due to oversight, must not have any nomenclatural effect. To delegate the compilation of such Lists to (for example) 'societies representative of international zoologists concerned with a major part of the animal kingdom' paves the way for the development of divergent nomenclatural practices in different groups of animals and possibly different parts of the world. This would thoroughly undermine the Code. I believe the status of a name should derive from a single source: this has to be the original publication and not *Zoological Record* or a 'List'.

## (7) Stuart H. McKamey

*Centre for Tropical Biodiversity, Zoologisk Museum, Universitetsparken 15, DK-2100 Copenhagen, Denmark*

I opposed the proposal in the draft (Article 11b) that a new name would cease to be available if it had not been recorded within five years in *Zoological Record*. However, an alternative has now been put forward on the Internet and also by Ride (BZN **53**: 6–7), according to which all new names would [as now] be permanently available from their original publication but a name recorded in *Zoological Record* would have precedence over a synonym so obscurely published that it was not recorded within five years.

I support such a proposal, which should extend to homonyms as well as synonyms. Perhaps a 10-year period would be more appropriate, at least initially; it could be reduced to five years (or even fewer) once systematists worldwide are accustomed to the procedure and electronic data storage and retrieval have advanced further. Thus, the alternative to Article 11b which I propose is:

Names are permanently available from their date of publication, but a name recorded in *Zoological Record* has precedence over a synonym or homonym not recorded within ten years of publication.

## (8) Graham C.D. Griffiths

*Department of Biological Sciences, University of Alberta, Edmonton, Canada T6G 2E9*

The proposals in Article 31b of the draft relating to the spellings of adjectival species-group epithets would cause unnecessary changes in the usage of names. There are many epithets, at least in entomology, which were first proposed many years ago in huge aggregate genera but which have not been used in the original combination for one or even two centuries, nor are ever likely to be so used again. To revert to the original spellings in such cases would be contrary to stability and long-standing usage. Based on my considerable experience in revisionary work, especially in

Diptera, I object to both the alternatives proposed in Articles 31b and 48a. I request that a third alternative be considered: that the ending in use at the time the new Code comes into effect shall remain unchanged henceforward, both in existing and in any new combinations subsequently proposed. Please forget about original endings.

(9) Frank-Thorsten Krell

*Theodor-Boveri-Institut für Biowissenschaften der Universität, Am Hubland, D-97074 Würzburg, Germany*

The number of generic names has of course increased enormously since the time of Linnaeus; this is due not only to the discovery of new organisms but also to the 'splitting' of nominal genera. Apart from being the expression of taxonomic progress the splitting has had the very useful effect of permitting the same specific epithets to be used in different genera.

Even in the 18th-century some coleopterists, for example, followed Linnaeus in using only a few genera while others adopted the more refined Fabrician classification. There were no nomenclatural rules, and once a species with the epithet (say) *albus* had been removed from a genus a new species placed in the genus could be given that epithet. The identical binomina did not exist simultaneously but successively, often separated by a long interval.

Today, one or two hundred years later, the two species names with the epithet *albus* may have been in wide and stable use in different higher-rank taxa for a very long time. Nevertheless, according to Article 57b in both the draft and the current Code the junior *albus* is 'permanently invalid'. I agree with Crosskey (BZN **53**: 14) that the application of the Code in these circumstances does not promote stability but is a cause of much confusion. I know of four examples of forgotten or recently discovered cases of ancient primary homonymy within the SCARABAEOIDEA (Coleoptera) but I cannot mention them, because to do so would precipitate name changes for well known species. I propose that taxonomically long-separated primary homonyms should not be replaced in future; naturally replacements already made should stand.

(10) N.Ju. Kluge

*Department of Entomology, Biological Faculty, St Petersburg State University, Universitetskaya naberezhnaya 7, St Petersburg 199034, Russia*

Article 16a in the draft specifies that to be available the name of a new nominal taxon must be accompanied by a diagnosis differentiating the taxon 'from other taxa of the same rank within the next higher taxonomic category', and that these 'must be explicitly cited by name'.

This requirement is unsatisfactory and vague. For example, if two new species are described in the same paper and they are compared only one with another, are their names available? If a previously published 'comparator' name is unavailable for some technical reason, is the new name therefore also unavailable? Further objections to this provision have already been made by other commentators.

The provisions in Article 16a and 16b, taken together, make very complicated rules of availability. Suppose that an author describes and compares a new taxon with

another in a Russian text, but that the English summary omits the comparison. There could be two opinions: (1) the name is unavailable, because the comparison was not made in 'a language using the Latin alphabet'; (2) the name is available, because there is a diagnosis in such a language and the comparison ('differentiation') can be made in any script.

The expression 'language using the Latin alphabet' is unsatisfactory. Since the intention is presumably that only a few widely understood (or easily translated) languages should be permitted, these should be specified by name. It would be pleasant for me to see Russian in such a list! Many taxa have been originally described in Russian, and at least for names published before the new Code comes into effect these descriptions have to be translated. Languages apart from English, French and German are used less in the taxonomic literature than is Russian, and if the latter is to be excluded they should be also.

(11) Vitor O. Becker

*P.O. Box 08223, 73301-Planaltina, DF, Brazil*

The proposition in the draft (Article 30) that genus-group names should be 'treated as words without gender, even when Greek or Latin or latinized' is ridiculous. This is for two main reasons: firstly because it is simply wrong, and secondly because the Commission must not use the Code to impose upon others who know how to do something properly that from now on they must do it wrongly. I would not feel it an obligation to submit myself to such an imposition.

Some may say 'Now with computers we have to change this rule. Otherwise information retrieval will become impossible'. This is absolutely untrue.

This matter cannot be decided by the vote of a few people. *La fuerza de la Ley* must prevail, not *La Ley de la Fuerza.*

(12) S. Endrödy-Younga (and eight colleagues)

*Transvaal Museum, Pretoria 0001, South Africa*

C.H. Scholtz

*Department of Zoology and Entomology, University of Pretoria, Pretoria 0002, South Africa*

C.D. Eardley (and four colleagues)

*Biosystematics Division, Plant Protection Research Institute, Private Bag X134, Pretoria 0001, South Africa*

Every scientific or technical discipline has its established form of communication in terms of language, chemical or mathematical formulae or rules of diagram structure. The retention of the internationally accepted method of communication is essential for general understanding in the subject.

The rules of communication in biological systematics and the formation of scientific names of taxa are fixed in the International Codes of nomenclature, and the

chosen language for names is Latin. All living languages are subject to changes due to general usage, but with Latin this is not the case.

The proposed changes to remove the grammar from Latin are not appropriate. Such changes would bring the language of communication to the level of the lowest common denominator and make a joke of the [still recommended] Latin. No taxonomist is expected to be proficient in Latin; what is required is a knowledge of the few rules about the construction of sound binomina and the naming of higher taxonomic categories. Advice on these is not difficult to obtain. The problems resulting from the degradation of Latin are reflected by the number of emended rules and recommendations put forward in an effort to make sense of the proposed changes. However, these rules and often contradictory recommendations would only serve to cause further confusion and impede stability in nomenclature.

On a separate subject, we fully support the Code Editorial Committee in upholding *Zoological Record* as an irreplaceable source of information in biological systematics. The reiterated duty of an author to ensure the notification of a publication supports the work of the editorial department of this most important publication.

## Case 2932

## *Hapalotrema* Looss, 1899 (Digenea): proposed designation of *H. loossi* Price, 1934 as the type species

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David Blair

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**Abstract.** The purpose of this application is to designate the nominal species *Hapalotrema loossi* Price, 1934, a spirorchid parasite of marine turtles, as the type species of the blood fluke genus *Hapalotrema* Looss, 1899. At present the type species is *Distoma constrictum* Leared, 1862, but this is due to a misidentification and the genus was based on material later named *H. loossi*. The name *H. mistroides* (Monticelli, 1896) is a senior subjective synonym of *H. loossi*.

**Keywords.** Nomenclature; taxonomy; Trematoda; Digenea; *Hapalotrema*; *Hapalotrema loossi*; *Hapalotrema mistroides*.

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1. Leared (1862, p. 169) described and figured a spirorchid (digenean) blood fluke *Distoma constrictum* from the heart of the 'edible or common' turtle (probably *Chelonia mydas* (Linnaeus, 1758)) from an unstated locality. No type specimens are known.

2. Monticelli (1896, p. 144) placed what he believed to be Leared's species in the genus *Mesogonimus* Monticelli, 1888; he stated that Leared's name was preoccupied by *Distomum* [sic] *constrictum* Mehlis (in Creplin, 1846, p. 142) but he did not provide an explicit replacement name; he may have considered that homonymy was resolved by his generic separation of the species, but in any event the Mehlis name, listed without any description or reference, is a nomen nudum and so not available as a senior homonym of *constrictum* Leared.

3. Monticelli (1896) described '*Mesogonimus constrictus* Leared' using specimens from the loggerhead turtle *Thalassochelys caretta* (Linnaeus, 1758) captured near Naples, Italy. On p. 144 he noted 'Per questo suo caratteristico aspetto, qualora avesse dovuto cambiar nome specifico, il distomide del Leared avrebbe potuto meritar quello *mistroides* ...'. Translated, this is a suggestion that *mistroides* might be a more descriptive and appropriate name because his specimens had a posterior end shaped like a spoon or scoop (Greek 'mystron'). However, the name *mistroides* was never used again in Monticelli's text or illustrations (figs. 1–3 and 19), where the species was always called *M. constrictus*. Since *mistroides* was not adopted as valid or proposed, even conditionally, as a replacement name for *constrictus* it was not made available by Monticelli.

4. Looss (1899, p. 656) erected the genus *Hapalotrema*, basing it on material which he considered to be *Distoma constrictum* Leared, 1862 and *Mesogonimus constrictus* sensu Monticelli, 1896. He provided a detailed description (pp. 750-752) and illustrations (pl. 30; figs. 72, 73) of specimens collected in Egypt from *Thalassochelys corticata* (= *T. caretta*). His material is strikingly similar to that reported by Monticelli but quite distinct from Leared's; however, under the Code the type species of *Hapalotrema* is the nominal species *Distoma constrictum* Leared, 1862 by monotypy and original designation.

5. Stiles & Hassall (1908, p. 279) listed *Hapalotrema mistroides* (Monticelli, 1896) without comment, giving '*Mesogonimus constrictus* (Leared) Monticelli' as a synonym. This adoption of *mistroides* as valid makes the specific name available from Monticelli, 1896 (Article 11e of the Code).

6. Price (1934) described several new genera and species of blood flukes, including specimens remarkably similar to Leared's (para. 1 above) from a captive green turtle (*Chelonia mydas*). Price (p. 138) provided the [unnecessary: see para. 1 above] replacement specific name *europaeus* for *Distoma constrictum* Leared and placed this species in his new genus *Learedius* (p. 136; type species *L. learedi* Price, 1934). He applied the name *Hapalotrema mistroides* to Monticelli's specimens, and created (p. 139) the new name *H. loossi* for those of Looss (para. 4 above).

7. Since the time of Looss (1899) his genus *Hapalotrema* has been treated as valid by all spirorchid specialists, and the concept of the genus has been based on his material (i.e. *H. loossi* Price, 1934). Authors using *Hapalotrema* include Stunkard (1923), Price (1934), Byrd (1939), Yamaguti (1958; 1971) and Smith (1972); there is a considerable literature on diseases and parasites of turtles and we have given to the Commission Secretariat a list of a further 29 references up to 1993. As explained above, however, Looss (like Monticelli before him) misidentifed his specimens and the type species is formally *Distoma constrictum* Leared, 1862 (= *Learedius europaeus* Price, 1934), which in our opinion cannot be identified with any particular known taxon. In the interest of stability we refer this case to the Commission under Article 70b of the Code and propose that *H. loossi* be designated as the type species of *Hapalotrema*.

8. One of us (T.R.P.) has examined Looss's material in the Swedish Museum of Natural History (slides 1570, 1571, 1840, 1843, 1855, 2663-2666, plus one slide with no number containing an entire fluke in serial section). This material was included by Price (1934) in *H. loossi*, and we here designate the specimen on slide 2663 as the lectotype of this nominal species.

9. It appears that none of Monticelli's material (para. 3 above) survives, so that there are no existing type specimens of *H. mistroides*. Nevertheless we, like earlier authors, consider it probable that Monticelli was dealing with the species described from the same host (but a different locality) by Looss, so that the valid name of the taxon is *H. mistroides* (Monticelli, 1896). Since the synonymy is only subjective we do not propose the suppression of the name *H. mistroides* or the designation of a specimen of *H. loossi* as a neotype of *H. mistroides*.

10. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to set aside all previous fixations of type species for the nominal genus *Hapalotrema* Looss, 1899, and to designate *Hapalotrema loossi* Price, 1934 as the type species;

(2) to place on the Official List of Generic Names in Zoology the name *Hapalotrema* Looss, 1899 (gender: neuter), type species by designation in (1) above *Hapalotrema loossi* Price, 1934 (a junior subjective synonym of *Mesogonimus mistroides* Monticelli, 1896);

(3) to place on the Official List of Specific Names in Zoology the name *mistroides* Monticelli, 1896, as published in the binomen *Mesogonimus mistroides* (senior subjective synonym of the specific name of *Hapalotrema loossi* Price, 1934, the type species of *Hapalotrema* Loos, 1899).

**Acknowledgement**

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## Case 2961

# *Alcyonidium mytili* Dalyell, 1848 (Bryozoa): proposed designation of a replacement neotype

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**Abstract**. The purpose of this application is to set aside a recently designated neotype of *Alcyonidium mytili* Dalyell, 1848, which is not in accord with the original description or probable type locality, and to replace it with a neotype which meets both these criteria and is of a different species of encrusting bryozoan.

**Keywords.** Nomenclature; taxonomy; Bryozoa; *Alcyonidium*; *Alcyonidium mytili*.

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1. Encrusting marine bryozoans which have been called *Alcyonidium mytili* Dalyell, 1848 occur in western Europe, the Arctic (Kluge, 1962) and both coasts of North America (Osburn, 1912; O'Donoghue & O'Donoghue, 1926). Much confusion existed over the characters of this nominal species, including the question of whether it is a valid entity (Marcus, 1940). Following studies during the nineteen-fifties and later, however, it has become clear that in western Europe intertidal and shallow-water specimens occurring mainly on rocks, stones and shells are different from better known sympatric material found on intertidal fucoids. An influential but incomplete description of specimens of the former type was given by Prenant & Bobin (1956) using material fom Brittany, France; nothing was included on reproductive biology, although some information was given by Eggleston (1970), based on observations made in British waters. Much recent work on the taxonomically difficult genus *Alcyonidium* Lamouroux, 1813 (type species *Ulva diaphana* Hudson, 1778) has confirmed that the rock- and algal-dwelling forms of so-called '*A. mytili*' are indeed distinct, but has also shown that neither is a single species. Recently d'Hondt & Goyffon (1992) designated a neotype of *A. mytili* from the Golfe du Morbihan, Brittany; however, as outlined below, this neotype and much other material identified as *A. mytili* does not belong to Dalyell's species.

2. The observations made by Dalyell in his *Rare and remarkable animals of Scotland* (vol. 1, 1847; vol. 2, 1848) were discussed in an appreciation (Anon., 1858) of his life by a writer whom we believe to have been John Fleming (see Cadman & Ryland, 1996b). Dalyell (1775–1851) practised law in Edinburgh and had a considerable reputation as an antiquarian, natural historian, musician and linguist. He was lame as a result of an early accident, and virtually all his material came from the marine and estuarine waters of the Firth of Forth near his home in Edinburgh. *Alcyonidium mytili* — 'Mussel Alcyonidium' — was described in 1848 (vol. 2, pp. 36–39, pl. 11) as occurring as thin spots or extensive spreads on the surface of shells.

3. The most tangible character of *A. mytili* noted by Dalyell was that the lophophore comprised 'about 15' tentacles; this is a lower number than found in any other encrusting *Alcyonidium* with which *A. mytili* might be confused (Prenant & Bobin, 1956; Hayward, 1985). This distinctive character has been overlooked by many workers this century. Dalyell studied live *A. mytili* over several weeks during one winter (1848, pp. 37–38), and it is significant that he — noted for his thoroughness — did not describe conspicuous whitish or pink embryo clusters, for these would have been expected in November–December had he been dealing with a larviparous species (see para. 6 below).

4. Dalyell's work had actually been written much earlier than 1847 1848: a dispute with the publishers had delayed it for five years (see Anon., 1858). It is unclear whether, at the time of writing it, Dalyell was aware of Hassall's (1841, p. 484) description of the superficially similar *Sarchochiton* [later *Alcyonidium*] *polyoum* from Dublin Bay in Ireland. From at least the time of Hincks's authoritative *A history of the British marine Polyzoa* (1880) until recent times it remained controversial as to whether *A. polyoum* was different from the *A. mytili* of authors; however, it can be readily distinguished (see Ryland, 1962; Thorpe, Ryland & Beardmore, 1978; d'Hondt & Goyffon, 1992). They also differ in their preferred substrates in that *A. polyoum* is largely restricted to intertidal *Fucus serratus* (see Ryland, 1962).

5. We should remark here that the well-known name *Alcyonidium polyoum* (Hassall, 1841) has been synonymised with *A. gelatinosum* (Linnaeus, 1761 [but not 1767]). *A. gelatinosum* (Linnaeus, 1767), one of the world's best known and most discussed bryozoans, is now (see Thorpe & Winston, 1984; 1986) called *A. diaphanum* (Hudson, 1778) and the name *A. gelatinosum* Linnaeus (with the date 1761) has been transferred to the taxon which was for long, and often is still, called *A. polyoum*. These changes are in accord with the principle of priority but cause considerable confusion.

6. A larviparous form of '*A. mytili*', most recently redescribed by Hayward (1985), has 17–18 tentacles (Hayward gives 17–21), shows pale pink brooded embryos (particularly in winter) and occurs on rocks, shells and crustacean carapaces. A specimen of this, from the Golfe du Morbihan, southern Brittany, has been designated (d'Hondt & Goyffon, 1992, pp. 466, 469) as the neotype of *Alcyonidium mytili*; it is now registered as LBIMM-BRY-19959 in the Muséum d'Histoire Naturelle in Paris. This larviparous *Alcyonidium* is distinct both from *A. gelatinosum* (sensu Linnaeus, 1761, i.e. *A. polyoum*) and *A. mytili* as originally described by Dalyell. The designation does not meet the Code requirement (Article 75d(5)) that a neotype should come from as near as possible to the original type locality. One of us (J.S.R.) has surveyed several shores of the Firth of Forth, Dalyell's locality (para. 3 above), and found that all the material from there is oviparous and has 15–17 tentacles; it is entirely in accordance with the original description, which has been amplified by Cadman & Ryland (1996a, 1996b). We have found that both this species and the larviparous '*A. mytili*' of d'Hondt & Goyffon and others occur sympatrically in our extensively studied areas in south-west Wales.

7. Hincks (1857) introduced *Alcyonidium hexagonum* as a replacement name for *A. mytili* on the grounds that 'The name which he [Dalyell] has assigned is altogether inappropriate, and conveys a false impression, inasmuch as the species is by no means a parasite of the Mussel exclusively...'. Hincks included a description of

*A. hexagonum* from South Devon, partly taken from an earlier paper (1851), and from this it is clear that he was dealing at least in part not with Dalyell's species but with a larviparous one, quite probably that represented by d'Hondt & Goyffon's specimen. However, since *A. hexagonum* is formally a replacement name for *A. mytili* it cannot be applied to a separate species (Article 67h of the Code).

8. We have proposed (Cadman & Ryland, 1996a) that the inappropriate neotype designation by d'Hondt & Goyffon (1992) for *A. mytili* be set aside and that a specimen of the oviparous species from the Forth be designated. This would make the name *A. mytili* accord both with Dalyell's original description and his type locality. It would also facilitate revision of the genus *Alcyonidium*, and especially of the larviparous species mistaken (e.g. by Prenant & Bobin, 1965 and d'Hondt & Goyffon, 1992) for *A. mytili*. We should point out that the latter may not be a single species since it seems to be equivalent to at least three genetic species (the '*A. mytili* I, II and III' of Thorpe, Ryland & Beardmore, 1978; see also d'Hondt & Goyffon, 1992). We propose as neotype of *A. mytili* Dalyell a specimen collected by J.S.R. from *Mytilus edulis* at Longniddry, East Lothian, Scotland (55°59′ N., 2°53′ W.) in February 1994; it is deposited in the Natural History Museum, London, as specimen BMNH 1994.4.5.1.

9. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to set aside the neotype designation by d'Hondt & Goyffon (1992) for the nominal species *Alcyonidium mytili* Dalyell, 1848 and to designate the specimen proposed in para. 8 above;

(2) to place on the Official List of Specific Names in Zoology the name *mytili* Dalyell, 1848, as published in the binomen *Alcyonidium mytili* and as defined by the neotype designated in (1) above.

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## Case 2964

# S.D. Kaicher (1973–1992), *Card Catalogue of World-Wide Shells*: proposed suppression for nomenclatural purposes

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**Abstract.** Between 1973 and 1992 S.D. Kaicher issued 60 card-packs of marine prosobranch gastropods in a *Card Catalogue of World-Wide Shells*. These card-packs, with over 6,200 cards, were intended as a guide for shell collectors to identify their specimens. Many of the cards have statements concerning the status of type specimens, some erroneous but others constituting valid lectotype designations. It is proposed that the Card Catalogue be suppressed for nomenclatural purposes, leaving it as originally intended as a valuable guide for shell collectors but without nomenclatural status.

**Keywords.** Nomenclature; taxonomy; S.D. Kaicher; *Card Catalogue of World-Wide Shells* (1973–1992); Mollusca; prosobranch gastropods.

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1. Mrs Sally Diana Kaicher of St. Petersburg (Florida) issued a series of sixty card-packs titled *Card Catalogue of World-Wide Shells* comprising printed photographs with captions of various species of mollusks. The first card-pack, titled 'Marginellidae' was issued in 1973 and contained 98 cards, each card individually numbered and having a photograph of a representative species, together with a caption containing, inter alia, the scientific name, geographic range, a brief diagnosis and the source of the specimen(s) illustrated. Each card-pack also included a 'title' or cover card including the name of the family and date of issuance, an 'acknowledgement' card thanking the individuals and museums whose shells were figured, and a larger sized 'errata' sheet containing corrections to previous card-packs together with an order form for the next card-pack. The date of the individual cards can only be determined with reference to the cover card for the pack containing that card.

2. These card-packs, covering various families, were issued for the next two decades, with about 100 cards per pack. The sixtieth and last such pack, on the family MARGINELLIDAE like the first, was issued on 14 May 1992 and brought the numbering of the series to 6215. In other words, over 6,200 of these index-card sized cards were issued. Despite their broadly inclusive title, these card-packs were restricted to marine prosobranch gastropods: nonmarine prosobranchs, opisthobranchs, pulmonates and the other mollusk classes were not treated.

3. The purpose of these card-packs was to help amateur shell collectors with the identification and generic classification of their personal shell collections. They were available by purchase from Kaicher's private address. Although sets of this work are present in the Mollusk libraries of several natural history museums, none has been

formally catalogued (i.e., with library call numbers) nor has this series been cited in *Zoological Record* or other abstracting sources.

4. Many of these cards were based on photographs of specimens in various private collections, as noted in the acknowledgement card for each pack. Others were based on specimens in certain natural history museums in the United States, Europe and Australia. For these museum specimens, Kaicher often gave the museum catalogue number, but sometimes gave only the museum acronym ('MCZ', 'USNM', etc.). She took pride in the fact that a number of 'type specimens' were included, as that appeared to enhance the value of her card-packs for identification purposes.

5. Unfortunately, Kaicher does not appear to have researched the literature or status of the supposed type specimens which she illustrated. This omission resulted in a number of mistakes on her part and has raised a most problematic issue concerning these card-packs as publications.

6. First, do these card-packs meet the criteria for publication (Articles 7–9 of the Code)? Yes, they were printed, widely distributed, readily obtainable, produced in large quantities, and do not contain a formal nomenclatural disclaimer. There is no specific indication that the card-packs were issued 'for the purpose of providing a permanent scientific record' (cf. Article 8a). This criterion is subjective in that, while some researchers would not consider a work such as her card-packs to be part of the permanent scientific record, others would do so.

7. Second, what are the impacts of her statements concerning the type status of the various museum specimens illustrated? Four examples have been chosen to illustrate the problems inherent in these card-packs. It must be noted that Article 74b specifies that if any author calls a specimen a 'holotype' (or even 'the type') when it is actually part of a syntype series, then that author has actually made a lectotype selection.

(1) In Card-pack 31 (NASSARIIDAE I, issued 2 April 1982), card no. 3207 of *Nassarius scissuratus* (Dall) has 'specimen illustrated is the holotype (USNM)...'. There are actually five syntype lots of this species (two in the U.S. National Museum and three in the Museum of Comparative Zoology, Harvard) and it cannot be determined which of the two USNM lots (containing 3 and 6 specimens respectively) includes the specimen figured by Kaicher.

(2) In Card-pack 48 (BUCCINIDAE III, issued 10 May 1987), card no. 4910 figured a specimen of *Ptychosalpinx globulus* (Dall) which was stated to be 'MCZ — holotype'. This species was described in 1889, based upon two syntype specimens (USNM 86984). Kaicher's figured specimen, MCZ 135260, is not from the type series or even type locality, having been collected in the twentieth century, and has no type status whatsoever. Other cards have similar errors in attributing type status to a specimen where none such exists (cf. Article 74a(v)).

(3) In Card-pack 19 (CANCELLARIIDAE, issued 6 December 1978), card no. 1940 of *Admete microscopica* (Dall) has 'specimen illustrated is the holotype (USNM 32977)'. In fact, this species is based upon three syntype lots, USNM 82977, USNM 94297 and USNM 107987. Presumably '32977' was an error for '82977'. A number of other type lots illustrated by Kaicher have similar errors in the catalogue numbers, or lack an indication of which syntype in a lot containing several specimens was that illustrated.

(4) In Card-pack 27 (TEREBRIDAE II, issued 1981), card no. 2710 of *Terebra acrior* Dall has 'specimen illustrated is the holotype (USNM 87294)...'. This number

actually refers to a syntype lot (there are two other syntype lots, one each in MCZ and USNM), and here we have what would be a valid lectotype selection by Kaicher, if her work is accepted as a publication for taxonomic purposes.

8. In conclusion, (a) the availability of Kaicher's privately printed card-packs as a publication for nomenclatural purposes is ambiguous, and (b) numerous statements concerning the status of type specimens were made by Kaicher, many in error but others potentially representing valid lectotype designations. Over 6,200 cards have been issued and the curatorial staff of a number of museums would have to check each of these cards to find specific mentions of 'type' specimens from their collections and then determine whether or not her statements were correct (including those that are really lectotype designations) or were in error. Searching and verifying these inadvertent lectotype designations would impose an onerous burden upon curators and professional malacologists conducting taxonomic research on marine prosobranch gastropods.

9. Therefore, I propose that the Commission should suppress Kaicher's *Card Catalogue of World-Wide Shells* for nomenclatural purposes. It was obviously not her intention nor desire to undertake any manner of systematic revision with implications for the status of the type material of the species illustrated. The numerous errors show that such research was not performed in the course of the preparation of these cards. Suppression of her work for nomenclatural purposes would have no effect on their utility for shell collectors which, after all, was the purpose of her card-packs. Instead, it would avoid any problems concerning the type status of the specimens illustrated. In particular, the inadvertent lectotype designations will be completely obviated, as it is clear that she had no intention of making lectotype selections in her card-packs.

10. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress for nomenclatural purposes the work by S.D. Kaicher (1973–1992) entitled *Card Catalogue of World-Wide Shells*;

(2) to place the above work on the Official Index of Rejected and Invalid Works in Zoological Nomenclature.

**Acknowledgements**

I thank R.E. Petit for bringing this problem to my attention. F.M. Bayer and C.W. Sabrosky provided helpful discussion on the manuscript.

**Reference**

**Kaicher, S.D.** 1973–1992. *Card Catalogue of World-Wide Shells*. Pack 1 (cards 1–99) through Pack 60 (cards 6110–6215). Privately published, St. Petersburg, Florida.

## Case 2925

# *Crenitis* Bedel, 1881, *Georissus* Latreille, 1809 and *Oosternum* Sharp, 1882 (Insecta, Coleoptera): proposed conservation

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**Abstract.** The purpose of this application is to conserve the names of three beetle genera which are junior objective synonyms of names which have not been used since the 19th century. The names are *Crenitis* Bedel, 1881 (threatened by *Fontiscrutor* Pandellé, 1876), *Georissus* Latreille, 1809 (threatened by *Cathammistes* Illiger, 1807) and *Oosternum* Sharp, 1882 (threatened by *Crypteuna* Motschulsky, 1863).

**Keywords.** Nomenclature; taxonomy; Coleoptera; *Crenitis*; *Georissus*; *Oosternum*.

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1. This application proposes the conservation of three generic names of beetles, each name being considered separately.

### *Crenitis* Bedel, 1881

2. Letzner (1840, p. 81) described the species *Hydrobius punctatostriatus*. In connection with the description of a new genus of HYDROPHILIDAE (*Hemisphaera*), Pandellé (1876, p. 58) introduced a new generic name, *Fontiscrutor*. This name was not accompanied by any description, but was unambiguously proposed for *Hydrobius punctatostriatus* and is thus available. Five years later Bedel (1881, p. 306) proposed the genus *Crenitis* for *Hydrobius punctatostriatus*; *Crenitis* is therefore a junior objective synonym of *Fontiscrutor*.

3. In Opinion 583 (1960), the Commission conserved *Crenitis* by the suppression of a senior objective synonym, *Creniphilus* Motschulsky, 1845. *Crenitis* Bedel, 1881 was placed on the Official List with *Hydrobius punctatostriatus* Letzner, 1840 as type species by monotypy. *Crenitis* was treated as masculine, but actually should be considered feminine, being derived from the Greek (spring nymph), with the suffix '*-tis*' indicating the feminine gender.

4. Apart from Pandellé (1876), no one has used *Fontiscrutor* as a valid name. Subsequent authors, without exception, have referred to the genus as *Crenitis*. Orchymont (1942, p. 25) recorded *Fontiscrutor* as a synonym of *Crenitis*, but treated it as a nomen nudum. Authors using the name *Crenitis* include Chiesa (1959, p. 121), Leech (1956, p. 338), Matsui & Nakane (1985, p. 89). A further nine references, dating from 1945 to the present and involving a further nine authors, are held by the Commission Secretariat.

5. Thus for more than 100 years the nominal genus *Crenitis* has been used for a well known, predominantly holarctic, genus of hydrophiloid beetles including about 40 named species. A change to the senior name *Fontiscrutor* would give rise to considerable confusion.

### *Georissus* Latreille, 1809

6. Rossi (1794, p. 81) and Fabricius (1798, p. 45) respectively described the species *Byrrhus crenulatus* and *Pimelia pygmaea*, which were synonymized by Schönherr (1806, p. 136) using the name *pygmaea*. This synonymy was generally accepted by subsequent authors and the species was for several decades known under the Fabrician name; *crenulatus* was reinstated as the valid name by Mulsant & Rey (1872, p. 14).

7. Illiger (1807a, p. 297) established a new genus, *Cathammistes*, which he also mentioned in another paper the same year (1807b, p. 322). The generic name was not accompanied by any description, but was unambiguously proposed for *Pimelia pygmaea* and is thus available. Two years later Latreille (1809, p. 377) proposed the generic name *Georissus* for *Pimelia pygmaea*; *Georissus* is therefore a junior objective synonym of *Cathammistes*. Stephens (1828, p. 105) introduced the unjustified emendation *Georyssus*, which has been adopted by some subsequent authors.

8. After Illiger proposed the name *Cathammistes* it has never been used as the valid name for the genus. Subsequent authors, without exception, have referred to the genus as *Georissus* (or *Georyssus*). A few authors have given *Cathammistes* as a synonym or nomen nudum under *Georissus* (e.g. Gemminger & Harold, 1868, p. 930; Ganglbauer, 1904, p. 93; Zaitzev, 1908, p. 313). Other authors using the name *Georissus* include Crowson (1955, p. 56), Delève (1967, p. 236), Satô (1972, p. 207). A further 15 references demonstrating the usage of the name *Georissus*, dating from 1945 to 1995 and involving a further 13 authors, are held by the Commission Secretariat.

9. The current concept of *Pimelia pygmaea* has been confirmed by my examination of the types in Fabricius's collection (Zoological Museum, Copenhagen), as is the synonymy with *Byrrhus crenulatus* Rossi. The latter was redescribed and its identity fixed by the designation of a lectotype by Bameul (1991, pp. 254–257).

10. Thus for almost 200 years the nominal genus *Georissus* (or *Georyssus*) has been used for a well known beetle genus, represented in all major biogeographic regions and including about 75 named species; it is the type genus of the family GEORISSIDAE (considered a subfamily of HYDROPHILIDAE by some authors). A change to the senior name *Cathammistes* would give rise to considerable confusion.

### *Oosternum* Sharp, 1882

11. In a published letter from an expedition to America, Motschulsky (1855, p. 20) referred to a species, *Cryptopleurum* (as '*Cryptopleurus*?') *aequinoctialis*, characterized as 'un gentille espèce fortement sillonnée et plus allongée que celle que nous trouvons chez nous [i.e. in Russia]; peut-être un genre nouveau?'. Although inadequate from a taxonomic view, the description is adequate to make the specific name available.

12. Eight years later, Motschulsky (1863, p. 448) proposed a new genus, *Crypteuma*, for *Cryptopleurum aequinoctialis* [as '*Cryptopleurus aequinoxialis*'], and stated: 'Il diffère des *Cryptopleurus* et des *Cercyon*, par son mésosternum ovalaire, applatie et concave au milieu, et par ses elytres fortement sillonées'. *Crypteuma* was mentioned again by Motschulsky (1868, p. 60), but seems not to have been used as a valid name since. The generic name *Crypteuma* and the specific name *aequinoctialis*

are clearly available, even though they do not appear in standard catalogues or nomenclators such as Knisch, 1924; Neave, 1939; Sherborn, 1922–1924.

13. In 1882 Sharp (p. 112) established the generic name *Oosternum* for a new species from Central America, *O. costatum*, which is the type species by monotypy. Subsequent to Motschulsky's own references to *Crypteuna*, the name was not mentioned again until Orchymont (1924, p. 262) noted that the name might be synonymous with *Oosternum*, although he was doubtful if the respective type species would be identical. However, he later (1928, pp. 78–79) referred to *Cryptopleurus aequinoxialis* [sic] Motschulsky as a dubious synonym of *Oosternum costatum* Sharp. Subsequently, the synonymies were discussed by Méquignon (1942, p. 28) who noted that: 'la synonymie des deux genres au moins, sinon des deux espèces, est fort vraisemblable'. The synonymy of the genera, but not of the species, was confirmed by Hansen (1991, pp. 304–305) who treated *Crypteuna* as a 'nomen oblitum'.

14. For more than 100 years the name *Oosternum* has been used for a genus of hydrophilid beetles. About 15 species — Nearctic, Neotropical, Afrotropical, East Palearctic, Oriental and Australian have at various times been referred to *Oosternum*. The genus was redefined by Hansen (1991, pp. 304–305) and comprises more than 30 known species (including the type species of *Crypteuna* and several yet to be described) restricted to the Nearctic, Neotropical and southeastern Palearctic regions. *Crypteuna* has not been used as a valid name since Motschulky's references to it. On the other hand, *Oosternum* has been used by all subsequent authors (e.g. Arnett, 1960, p. 220; Leech, 1956, p. 339; Smetana, 1978, p. 44; Spangler, 1962, p. 97). A further nine references demonstrating the usage of the name *Oosternum*, dating from 1945 to 1995 and involving a further four authors, are held by the Commission Secretariat. A change to the senior name *Crypteuna* would give rise to considerable confusion.

15. A prima facie case exists under Article 79c(2) for the conservation of the three names *Crenitis* Bedel, 1881, *Georissus* Latreille, 1809 and *Oosternum* Sharp, 1882 by the suppression of their senior objective synonyms.

16. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the following generic names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
   (a) *Fontiscrutor* Pandellé, 1876;
   (b) *Cathammistes* Illiger, 1807;
   (c) *Crypteuna* Motschulsky, 1863;

(2) to place on the Official List of Generic Names in Zoology the following names:
   (a) *Georissus* Latreille, 1809 (gender: masculine), type species by monotypy *Pimelia pygmaea* Fabricius, 1798 (a junior subjective synonym of *Byrrhus crenulatus* Rossi, 1794);
   (b) *Oosternum* Sharp, 1882 (gender: neuter), type species by monotypy *Oosternum costatum* Sharp, 1882;

(3) to emend the entry on the Official List of Generic Names in Zoology for *Crenitis* Bedel, 1881 to read 'gender: feminine' in place of 'gender: masculine';

(4) to place on the Official List of Specific Names in Zoology the following names:
   (a) *crenulatus* Rossi, 1794, as published in the binomen *Byrrhus crenulatus* (senior subjective synonym of the type species of *Georissus* Latreille, 1809);
   (b) *costatum* Sharp, 1882, as published in the binomen *Oosternum costatum* (specific name of the type species of *Oosternum* Sharp, 1882);

(5) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the following names:
   (a) *Fontiscrutor* Pandellé, 1876;
   (b) *Cathammistes* Illiger, 1807;
   (c) *Crypteuna* Motschulsky, 1863.

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## Case 2974

## *Stilpon* Loew, 1859 (Insecta, Diptera): proposed conservation

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**Abstract.** The purpose of this application is the conservation of the generic name *Stilpon* Loew, 1859 for a widely distributed genus of flies placed in the EMPIDIDAE or HYBOTIDAE. The senior subjective synonym *Agatachys* Meigen, 1830 is available, but it has only once been listed as a valid name and its suppression is proposed.

**Keywords.** Nomenclature; taxonomy; Diptera; *Agatachys*; *Stilpon*.

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1. Meigen (1830, p. 343) described as new the empidoid species *Tachydromia celeripes*, based on several specimens which he stated he had received from Wilhelm von Winthem under the manuscript name *Agatachys flavipes*. Because in his treatment of *Tachydromia* the previously unpublished name *A. flavipes* was only mentioned by Meigen as a synonym of *T. celeripes*, the genus-group name *Agatachys* had no standing in zoological nomenclature until it was many years later listed (see para. 3 below) as the valid name of a taxon (Article 11e of the Code).

2. Loew (1859, p. 35) proposed the genus-group name *Stilpon* for two species, *Tachydromia graminum* Fallén, 1815 (p. 15) and *Drapetis lunata* Walker, 1851 (p. 136); in 1864 Loew (p. 5) designated *T. graminum* as the type species of *Stilpon*. The genus currently (see Cumming & Cooper, 1992, p. 956) contains some 25 species from the Nearctic, Palearctic, Afrotropical and Oriental Regions, and a fossil specimen is known from Dominican amber (Evenhuis, 1994, p. 355).

3. Coquillett (1910) listed the names of most genus-group taxa of North American Diptera and proposed type species for those taxa which had not previously been typified. In this work *Stilpon* was treated (p. 504) as the junior synonym of *Agatachys*, which was listed as the valid name; under Article 11e of the Code *Agatachys* Meigen, 1830 is thus deemed to be an available name. *Tachydromia celeripes* Meigen, 1830 is the type species of *Agatachys* by monotypy (Article 67(l) of the Code).

4. *Agatachys* and *Stilpon* are subjective synonyms, and their respective type species (*T. celeripes* and *T. graminum*) have been synonymized (Collin, 1961, p. 55).

5. Since its listing by Coquillett (1910) *Agatachys* has never again been treated as valid, but *Stilpon* has been used in the EMPIDIDAE or HYBOTIDAE by numerous authors. In addition to those cited here, a list of 12 representative works published between 1961 and 1989 has been given to the Commission Secretariat. Replacement of *Stilpon*

Loew, 1859 by *Agatachys* Meigen, 1830 would result in many new combinations and would cause undue confusion in the nomenclature of the EMPIDOIDEA; it would offer no compensating advantage.

6. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the name *Agatachys* Meigen, 1830 for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;

(2) to place on the Official List of Generic Names in Zoology the name *Stilpon* Loew, 1859 (gender: masculine), type species by subsequent designation by Loew (1864) *Tachydromia graminum* Fallén, 1815;

(3) to place on the Official List of Specific Names in Zoology the name *graminum* Fallén, 1815, as published in the binomen *Tachydromia graminum* (specific name of the type species of *Stilpon* Loew, 1859);

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Agatachys* Meigen, 1830, as suppressed in (1) above.

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## Case 2905

# *Labrus* Linnaeus, 1758, *Cichlasoma* Swainson, 1839 and *Polycentrus* Müller & Troschel, 1848 (Osteichthyes, Perciformes): proposed conservation of usage by the designation of neotypes for *Labrus bimaculatus* Linnaeus, 1758 and *L. punctatus* Linnaeus, 1758

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**Abstract.** The specific name of *Labrus bimaculatus* Linnaeus, 1758 has been used for two very different fish. It is used for a common northeastern Atlantic/Mediterranean species (the type species of *Labrus* Linnaeus, 1758; family LABRIDAE) and for a common freshwater species of South America (which has been wrongly treated as the type species of *Cichlasoma* Swainson, 1839; family CICHLIDAE). The type species of *Cichlasoma* is the nominal species *L. punctatus* Linnaeus, 1758. It is proposed that the name *L. bimaculatus* should be maintained for the labrid species whilst adopting *C. punctatum* for the cichlid taxon now known as *C. bimaculatum*. However, the presumed holotype of *L. bimaculatus* is a specimen of *Cichlasoma*, and the lectotype of *L. punctatus* is a specimen of another South American species, *Polycentrus schomburgkii* Müller & Troschel, 1848 (the type species of *Polycentrus* Müller & Troschel, 1848; family NANDIDAE). The purpose of this application is to set aside the original type specimens of *L. bimaculatus* and *L. punctatus* and to designate neotypes in accordance with the current usages of the generic names *Labrus* and *Cichlasoma* respectively, and thus to stabilize the family-group names LABRIDAE and CICHLIDAE. Designation of the *L. punctatus* neotype will remove the names *L. punctatus* and *Cichlasoma* from the formal synonymy of *P. schomburgkii* and *Polycentrus* and thereby stabilize the current usage of the latter names.

**Keywords.** Nomenclature; taxonomy; Osteichthyes; Perciformes; LABRIDAE; CICHLIDAE; NANDIDAE; *Labrus*; *Cichlasoma*; *Polycentrus*.

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1. Linnaeus (1758, pp. 282–288) used the name *Labrus* for 40 nominal species of fish. He based (p. 285) his description of *Labrus bimaculatus* on his 1754 (p. 66, pl. 31, fig. 6) description of a specimen in the Museum Adolphi Friderici (see para. 4 below). The locality was given as the Mediterranean. Bonaparte ([1841]) is often cited as having designated *L. bimaculatus* as the type species of *Labrus* (see, for example, Gomon & Forsyth, 1990, p. 873). However, Bonaparte referred only to the junior synonym *L. vetula* Bloch, 1792, a nominal species not originally included in *Labrus*, and his designation, which did not mention *L. bimaculatus*, is therefore invalid. The

first valid type species designation for *Labrus* is that of *L. bimaculatus* by Jordan (1891, p. 607). This has been followed by many recent authors (see, for example, Bauchot, 1963, p. 79; Quignard, 1966, p. 23). *Labrus* is the type genus of the family LABRIDAE (published as Labridi by Bonaparte, [1832], p. [10]) which contains some 500 taxa (see Nelson, 1994, p. 386) and is the second largest family of marine fishes.

2. Linnaeus (1758, pp. 285–286) described *Labrus punctatus* based on two sources, his own description (1754, p. 66, pl. 31, fig. 5) of a specimen in the Museum Adolphi Friderici and Gronovius's description (1754, p. 36, no. 87) of 'Labrus bruneus' from Surinam. The latter was illustrated by Gronovius in 1756 (pl. 5, fig. 4). The type locality of *punctatus* was given as Surinam.

3. Swainson (1839, p. 230) described the genus *Cichlasoma* (family CICHLIDAE Bleeker, 1859, p. xviii; published as Cychloidei). *Labrus punctatus* Bloch, 1792 (pp. 20–22, pl. 295, fig. 1; = the nominal species *L. punctatus* Linnaeus, 1758) was given as the single included species.

4. Fernholm & Wheeler (1983) discussed the identity of Linnaean fish material. They assumed (p. 253) that the single specimen of *Labrus bimaculatus* in the Adolphi Friderici Museum collection (now deposited in the Naturhistoriska Riksmuseet, Stockholm, catalogue no. NRM LP 7) is the holotype and recorded it as a cichlid belonging in the New World genus *Cichlasoma*. They commented, following earlier authors, on the frequency with which Linnaeus had confused the localities of taxa. Fernholm & Wheeler (1983, p. 252) noted that the nominal species *Labrus punctatus* was composite, the specimen in the Museum Adolphi Friderici collection (Naturhistoriska Riksmuseet catalogue no. NRM LP 4) belonging to the taxon currently called *Polycentrus schomburgkii* Müller & Troschel, 1848 (a South American species, the type of *Polycentrus* Müller & Troschel, 1848; family NANDIDAE), whilst Gronovius's (1754) description referred to a member of the CICHLIDAE, identified by a number of authors (including Eigenmann, 1912, p. 495) as *Cichlasoma bimaculatum* (Linnaeus, 1758). They noted that in 1758 (but not in 1754) Linnaeus had recorded incorrectly the meristic data of the *punctatus* specimen, and that his (1754) illustration was rather poor; both of these factors had previously obscured its true identity as a nandid. Gronovius's specimen is lost. Kullander (1983, p. 84) designated the remaining syntype, Linnaeus's specimen in the Adolphi Friderici Museum collection, as the lectotype of *Labrus punctatus*. This removed *L. punctatus* from the cichlids, placed *punctatus* and *Cichlasoma* in the NANDIDAE and rendered the names senior subjective synonyms of *Polycentrus schomburgkii* and *Polycentrus*.

5. The specific name of *Labrus punctatus* Linnaeus, 1758 is not in use either in the CICHLIDAE or the NANDIDAE. An application (Case 2880) for the conservation of the much used nandid (leaf fish) specific name of *Polycentrus schomburgkii* Müller & Troschel, 1848 (the type species of *Polycentrus* Müller & Troschel, 1848) by suppressing the senior subjective synonym *L. punctatus* (see para. 4 above) was submitted by Dr Hans-Joachim Paepke (*Zentralinstitut Museum für Naturkunde der Humboldt-Universität zu Berlin, Institut für Systematische Zoologie, Berlin*) and published in BZN **50**: 215–218 (September 1993). The name *P. schomburgkii* has had nearly 140 years of usage and, as noted in Dr Paepke's application, this has not been influenced by Kullander's (1983) lectotype designation. Of a number of cited post-1983 authors (BZN **50**: 216, para. 5) only one (Stawikowski, 1992, p. 687) had adopted *Polycentrus punctatus*. The 30 syntypes (two adults and 28 juveniles) of

*P. schomburgkii*, collected in the Essequibo (British Guiana, now Guyana), are housed in the Zoologisches Museum der Humboldt-Universität of Berlin, catalogue nos. ZMB 1024 and ZMB 20604.

6. The name *Labrus bimaculatus* Linnaeus, 1758 is well known for the cuckoo wrasse, a common northeastern Atlantic and Mediterranean labrid fish, used by numerous authors (see, for example, Bauchot & Quignard, 1973, p. 426; Quignard & Pras, 1987, p. 927; Fischer, Schneider & Bauchot, 1987, p. 1143; Fricke, 1987, p. 111; Gomon & Forsyth, 1990, p. 875) and has appeared in recent national and international catalogues of endangered species (see, for example, Magalhaes & Rogado, 1993, p. 74; Fricke et al., 1994, 1995; Fricke, Berghahn & Neudecker, 1995, p. 111). The name *Cichlasoma bimaculatum* (Linnaeus, 1758), also based on *Labrus bimaculatus* Linnaeus (1758, p. 285), has been used for the common and widespread two-spotted cichlid fish of South America (see, for example, Steindachner, 1875, p. 82; Haseman, 1911, p. 339; Miranda Ribeiro, 1915, p. 60; Axelrod, Burgess, Pronek & Walls, 1986, p. 337). However, the species was restricted by Kullander (1983, pp. 65–89, pls. 1 and 2; 1986, p. 335) to a form only distributed from Guiana to Venezuela. The name has therefore been unstable; it was applied in recent years to what is now a complex of species. Thus, references to *C. bimaculatum* in, for example, the Amazon are incorrect. Eigenmann (1912, p. 494) cited *L. bimaculatus* as the type of *Cichlasoma*; although an invalid designation, *L. bimaculatus* has been treated as the type by a number of recent authors (Kullander, 1983, pp. 9, 65–89; 1986, p. 335; Kullander & Nijssen, 1989, p. 131; Eschmeyer & Bailey, 1990, p. 95), while the name *Cichlasoma punctatum* has not been used (para. 5 above).

7. Recognition that the holotype of *Labrus bimaculatus* Linnaeus, 1758 is a cichlid (para. 4 above) would mean that *Labrus* Linnaeus, 1758 is formally a senior subjective synonym of *Cichlasoma* Swainson, 1839 and, since there is no junior synonym for *Labrus* as currently understood, a new name would be required for this genus. The next available specific name, that of *Labrus mixtus* Linnaeus, 1758, would be adopted for the common northeastern Atlantic labrid species. The family-group name LABRIDAE Bonaparte, [1832] would be used in place of CICHLIDAE Bleeker, 1859; the name CICHLIDAE, which refers to the second largest family of freshwater fishes containing some 680 taxa (see Nelson, 1984, pp. 315–317), would be replaced by the next available synonym, PHARYNGODOPILIDAE Cocchi, 1864 (p. 89; type genus *Pharyngodopilus* Cocchi, 1864). These changes would severely threaten the stability of nomenclature. We propose that the use of the name *Labrus bimaculatus* Linnaeus, 1758 should be maintained in the LABRIDAE, and that *Cichlasoma punctatum* (Linnaeus, 1758) should be adopted for the cichlid species (see para. 8 below). Wheeler (1969, p. 368) used the name *Labrus mixtus* Linnaeus, 1758 (p. 287), a contemporary synonym for the Mediterranean and Atlantic labrid, but most authors continue to use the name *L. bimaculatus*. We propose that the cichlid holotype of *L. bimaculatus* be set aside and that the labrid usage of the name be stabilized by the designation of a neotype. The proposed specimen is a female (SL 299 mm), catalogue no. SMNS 12625 in the Staatliches Museum für Naturkunde, Stuttgart, Germany, collected by H.A. Pagenstecher in 1865 from Palma de Mallorca (39°34′ N, 2°39′ E) in the Balearic Islands, Spain.

8. We propose that the specific name of *Labrus punctatus* Linnaeus, 1758 should be adopted for the South American cichlid by setting aside Kullander's (1983) nandid

lectotype (para. 4 above) and designating a cichlid neotype. The proposed specimen is catalogue no. CAS-SU 53337 (SL 102 mm) in the California Academy of Sciences, San Francisco, U.S.A., collected by I.D. White and party on 5 March 1959 south of Paramaribo, near Zanderij airfield, Surinam (5°27′N, 55°12′W). This designation removes *L. punctatus* and *Cichlasoma* from the formal synonymy of *Polycentrus schomburgkii* Müller & Troschel, 1848 and *Polycentrus* Müller & Troschel, 1848; as a means of conserving the latter names it is acceptable to Dr Paepke (in litt., September 1995; see para. 5 above) and his application to suppress *punctatus* will not now be pursued. As noted in paras. 5 and 6 above, the name *Cichlasoma bimaculatum* (Linnaeus, 1758) has been used for the cichlid fish, and treated as the type species of *Cichlasoma* Swainson, 1839, whilst *punctatus* has remained virtually unused. However, the name *bimaculatus* is used much more commonly in the labrids than in the cichlids. Additionally, the nomenclatural situation for northeast Atlantic labrid fish is stable whilst names for South American cichlids are still far from stable and there have been frequent recent changes. For these reasons it is appropriate to change the cichlid use of *bimaculatus* rather than the labrid one, and to adopt *punctatus* as the name for the South American fish.

9. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to set aside all previous type fixations for the following nominal species:
   (a) *Labrus bimaculatus* Linnaeus, 1758 and to designate as neotype the female specimen in the Staatliches Museum für Naturkunde, Stuttgart, catalogue no. SMNS 12625, proposed in para. 7 above;
   (b) *Labrus punctatus* Linnaeus, 1758 and to designate as neotype the specimen in the California Academy of Sciences, San Francisco, catalogue no. CAS-SU 53337, proposed in para. 8 above;

(2) to place on the Official List of Generic Names in Zoology the following names:
   (a) *Labrus* Linnaeus, 1758 (gender: masculine), type species by subsequent designation by Jordan (1891) *Labrus bimaculatus* Linnaeus, 1758;
   (b) *Cichlasoma* Swainson, 1839 (gender: neuter), type species by monotypy *Labrus punctatus* Linnaeus, 1758;
   (c) *Polycentrus* Müller & Troschel, 1848 (gender: masculine), type species by monotypy *Polycentrus schomburgkii* Müller & Troschel, 1848;

(3) to place on the Official List of Specific Names in Zoology the following names:
   (a) *bimaculatus* Linnaeus, 1758, as published in the binomen *Labrus bimaculatus* and as defined by the neotype designated in (1)(a) above (specific name of the type species of *Labrus* Linnaeus, 1758);
   (b) *punctatus* Linnaeus, 1758, as published in the binomen *Labrus punctatus* and as defined by the neotype designated in (1)(b) above (specific name of the type species of *Cichlasoma* Swainson, 1839);
   (c) *schomburgkii* Müller & Troschel, 1848, as published in the binomen *Polycentrus schomburgkii* (specific name of the type species of *Polycentrus* Müller & Troschel, 1848).

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## Case 2976

## *Holotropis herminieri* Duméril & Bibron, 1837 (currently *Leiocephalus herminieri*) and *Proctotretus bibronii* T. Bell, 1842 (currently *Liolaemus bibronii*) (Reptilia, Squamata): proposed conservation of the specific names

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**Abstract.** The purpose of this application is to conserve the specific names of the tropidurid lizards *Leiocephalus herminieri* (Duméril & Bibron, 1837) and *Liolaemus bibronii* (T. Bell, 1842). The former (now extinct) is known from Martinique, whilst the latter is a southern South American species. The names are threatened by the senior subjective synonyms *Tropidolepis aculeatus* and *T. bellii* respectively, both of Gray (1831), which have only once (in 1834) been used.

**Keywords.** Nomenclature; taxonomy; Reptilia; tropidurids; *Leiocephalus herminieri*; *Liolaemus bibronii*; Martinique; southern South America.

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1. Gray (1831, pp. 42–44) recognized ten species in the genus *Tropidolepis* Cuvier, 1829. Six of these were the species included by Wiegmann (1828, cols. 369–370) in his genus *Sceloporus*. Three of the species were new and each was accompanied by a description.

2. One of the new species, *Tropidolepis aculeatus* Gray, 1831 (p. 43), was said to be from Martinique and its brief description agrees with the characteristics of *Holotropis herminieri* Duméril & Bibron, 1837 (p. 261, pl. 44), the only member of the family TROPIDURIDAE on the island. Gray did not mention a specimen or the location of material.

3. For the remaining two of Gray's (1831) species, *Tropidolepis bellii* and *T. fasciatus*, no locality was given. Both were said to be represented in the Bell Museum, most of the collection from which was subsequently incorporated into the British Museum, London, although some specimens are in the Muséum National d'Histoire Naturelle, Paris. However, no specimens listed in British Museum catalogs by either Gray (1845) or Boulenger (1885) can be associated with these names. The specimens may be in the Paris Muséum but at present are unaccounted for. The descriptions, without locality or specimens, are inadequate for unequivocal allocation to species.

4. The only subsequent usage of the three species-group names *Tropidolepis aculeatus*, *T. bellii* and *T. fasciatus* was in Wiegmann (1834), where each taxon was

listed as a member of the genus *Sceloporus* Wiegmann, 1828. None was cited in the appropriate synopses by Duméril & Bibron (1837), Gray (1845) or Boulenger (1885), although each work cited Gray (1831) in other contexts. Gray himself never subsequently referred to his (1831) new species. These omissions have resulted in the (1831) Gray names remaining unused by other workers.

5. The name *Tropidolepis aculeatus* Gray, 1831 is clearly referable to the species consistently known as *Leiocephalus herminieri* (Duméril & Bibron, 1837) and is senior to the latter name. Rigid application of the Principle of Priority would result in the earlier name becoming valid. However, revival of Gray's name, unused for over 160 years, would be an unacceptable violation of nomenclatural stability. The name *L. herminieri* has been used by Boulenger (1885, p. 166, who cited three works by four authors), by Etheridge (1964, p. 56, who cited three additional works by four additional authors), and by Etheridge (1966a, p. 56; 1966b, p. 88), Schwartz & Thomas (1975, p. 130), and Schwartz & Henderson (1988, p. 137; 1991, p. 430). No other name has been applied to the taxon since 1837.

6. The only specimens known of *Holotropis herminieri*, which is now extinct, are the three syntypes in the Paris Muséum, and a skeleton in the Natural History Museum, London. Two of the specimens in Paris, MNHN 1826 and 6829, are labelled 'La Martinique'; the third, MNHN 2389, is labelled 'Trinité' (a town on the northeastern coast of Martinique); the skeleton in London, BMNH 1952.12.3.10, is also labelled 'Martinique' (see Etheridge, 1964, p. 56, footnote). Gray (1831) described the pointed scales of *T. aculeatus* and his description was therefore presumably based on one or more of the three specimens in the Paris Muséum, although Duméril & Bibron themselves (1837, p. 263) noted that they had seen material in both museums and thought that *T. herminieri* was a junior synonym of Gray's (1827) *Leiocephalus carinatus* from Cuba. No other specimens are known on which Gray might have based his description of *T. aculeatus*.

7. Gray's (1831) *Tropidolepis bellii* and *T. fasciatus* were based on Bell Museum specimens and probably pertain to South American taxa. The well known South American polychrid species *Leiosaurus bellii* (pp. 242–244, pl. 39, fig. 1) and *L.* (currently *Pristidactylus*) *fasciatus* (pp. 244–246) were described by Duméril & Bibron (1837). Neither of the descriptions of these taxa agrees with Gray's of 1831. Gray (1845, p. 224) and Boulenger (1885, p. 127) later cited *Leiosaurus fasciatus* Duméril & Bibron (originally described by d'Orbigny & Bibron in 1837) as 'S. America. Mus. Paris' and 'Rio Negro, N. Patagonia' respectively. The discrepancies in the descriptions of Gray's (1831) *T. fasciatus* and d'Orbigny & Bibron's (1837) *L. fasciatus* mean that Gray's taxon cannot be identified as d'Orbigny & Bibron's species. The name *T. fasciatus* Gray must be considered a nomen dubium and, to avoid confusion with *L. fasciatus* d'Orbigny & Bibron, we propose that it be suppressed. Gray (1845, p. 224) and Boulenger (1885, p. 125) also cited *Leiosaurus bellii* Duméril & Bibron, 1837 and listed a specimen from South America.

8. Gray (1845, p. 212) described a nominal species *Liolaemus bellii* and listed a single specimen from Chile. It is likely that Gray's (1831) *Tropidolepis bellii* is the same as his (1845) *L. bellii* since the two descriptions are reasonably similar. As noted by Boulenger (1885, p. 146), the name *Liolaemus bellii* Gray, 1845 is a junior synonym of *Proctotretus bibronii* T. Bell, 1842 (p. 6, pl. 3, fig. 1), described from a young female specimen (BMNH 1946.8.5.68 in the Natural History Museum,

London) collected by Charles Darwin from Port Desire, Patagonia. The dates of publication of part 5 of *The zoology of the voyage of H.M.S. Beagle* were set out by Vanzolini (1977, p. 61); pp. 1–16 were published in 1842 and the remainder in 1843. The specific name of *Liolaemus bibronii* has been consistently applied to the southern South American iguanid species and has been used in recent representative works by Peters & Donoso-Barros (1970, p. 180), Cei (1986, pp. 256–258, pl. 28) and Frank & Ramus (1995, p. 168). The numerous references in Donoso-Barros (1966, pp. 204–207) demonstrating usages of the name, and the number of articles using it in the compilation by Duellman (Ed., 1979), provide ample evidence of its fixity. The earlier name *T. bellii* Gray, 1831 constitutes a threat to the nomenclatural stability of *L. bibronii* and we therefore propose that it be suppressed.

9. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the following specific names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
  (a) *aculeatus* Gray, 1831, as published in the binomen *Tropidolepis aculeatus*;
  (b) *bellii* Gray, 1831, as published in the binomen *Tropidolepis bellii*;
  (c) *fasciatus* Gray, 1831, as published in the binomen *Tropidolepis fasciatus*;

(2) to place on the Official List of Specific Names in Zoology the following names:
  (a) *herminieri* Duméril & Bibron, 1837, as published in the binomen *Holotropis herminieri*;
  (b) *bibronii* T. Bell, 1842, as published in the binomen *Proctotretus bibronii*;

(3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the following names:
  (a) *aculeatus* Gray, 1831, as published in the binomen *Tropidolepis aculeatus* and as suppressed in (1)(a) above;
  (b) *bellii* Gray, 1831, as published in the binomen *Tropidolepis bellii* and as suppressed in (1)(b) above;
  (c) *fasciatus* Gray, 1831, as published in the binomen *Tropidolepis fasciatus* and as suppressed in (1)(c) above.

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## Case 2970

# *Tyrannula minima* Baird & Baird, 1843 (currently *Empidonax minimus*) and *Contopus pertinax* Cabanis & Heine, 1859 (Aves, Passeriformes): proposed conservation of the specific names

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**Abstract.** The purpose of this application is to conserve the specific names of two North American tyrant flycatchers (family TYRANNIDAE), *Empidonax minima* (Baird & Baird, 1843), the least flycatcher, and *Contopus pertinax* Cabanis & Heine, 1859, the greater pewee. The names are threatened by the virtually unused senior synonyms *Platyrhynchus pusillus* and *Tyrannula musica* respectively, both of Swainson (1827).

**Keywords.** Nomenclature; taxonomy; Aves; tyrant flycatchers; least flycatcher; greater pewee; *Empidonax minimus*; *Contopus pertinax*; North America.

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1. In a paper on birds collected by William Bullock in Mexico, Swainson (1827, p. 366) described and named *Platyrhynchus pusillus* from the 'maritime parts of Mexico'. Later, he (1832, pp. 144–146) gave a detailed description, accompanied by measurements and a color plate, of a bird from Carlton House, Saskatchewan, Canada, under the name *Tyrannula pusilla*. Although Swainson (1832) mentioned that he compared the Carlton House bird with one from the shores of Mexico, there is no known extant type specimen nor a specimen from Carlton House. On the basis of that comparison, Swainson (1832) placed *pusilla* in the genus *Tyrannula* Swainson, 1827.

2. Baird & Baird (1843, p. 284) described and named a tyrant flycatcher (family TYRANNIDAE) *Tyrannula minima*, noting that the wing formula of their bird differed from the formula given by Swainson (1832) for *T. pusilla*. The holotype of *T. minima*, from Carlisle, Pennsylvania, is catalog no. 4465 in the collection of the Academy of Natural Sciences of Philadelphia (see Stone, 1899, p. 23).

3. Within the current genus *Empidonax* Cabanis, 1855, in the 19th century *pusillus* was treated in various ways. Usually the species was confused with *Empidonax traillii* (Audubon, 1828). Baird (1858, p. 194) used *pusillus* as the name of a species occurring geographically between *E. traillii* and *minimus*. Coues (1884, p. 442) treated *pusillus* as a species aligned with, possibly the same as, *traillii* and replacing that form to the west. The American Ornithologists' Union (A.O.U.) (1886, p. 235) considered *traillii* a subspecies of *pusillus*, which had equal status with *minimus*. It is not certain, however, that any of those authorities were using *pusillus* for the same taxon that Swainson did. The confusion is summarized by Brewster (1895, p. 161) who suggested that until Swainson's type from Mexico was found and studied '... we are justified in ignoring the name *pusillus* and adopting — or rather retaining — that of *traillii* for

the flycatcher which we have just been considering'. Although several writers discussed the identity of Swainson's *pusillus* after that time, none used it as a valid name between 1895 and 1964.

4. Todd (1963, p. 482) believed that the name *Empidonax pusillus* belonged to the species generally known as *E. minimus* but used the latter name 'to avoid further changes and confusion in the nomenclature of this difficult group of birds'. Phillips, Marshall & Monson (1964, p. 87) and Monson & Phillips (1981, p. 104) used the name *Empidonax pusillus* (Swainson) for the species known for the previous 70 years as *Empidonax minimus* (Baird & Baird), but did not give the original citation for Swainson's name or the reason for its use. Rea (1983, p. 188) followed Phillips et al. (1964) in the use of *pusillus*, indicating that it was based on *Platyrhynchus pusillus* Swainson, 1827. To our knowledge, no other writer has used the name *pusillus* Swainson for a species of *Empidonax*.

5. *Platyrhynchus pusillus* Swainson, 1827 has priority over its putative synonym *Tyrannula minima* Baird & Baird, 1843. However, to resurrect Swainson's long-unused name would cause considerable confusion because *Empidonax minimus* (Baird & Baird, 1843) is well known in the recent literature (see, for example, the representative works by Miller, Friedmann, Griscom & Moore, 1957, p. 87; Traylor, 1979, p. 140; A.O.U., 1983, p. 453; and Sibley & Monroe, 1990, p. 354). Furthermore, the identity of *Platyrhynchus pusillus* Swainson is uncertain in the absence of a holotype. We therefore propose that the usage of Baird & Baird's (1843) name *minimus* be maintained and that Swainson's (1827) name be suppressed.

6. In the same paper (para. 1 above), Swainson (1827, p. 368) also briefly described and named the new species *Tyrannula musica*. He did not give a locality or designate a holotype and his description was merely 'Cinereous-brown, beneath dirty yellow, tail forked; wings lengthened, brown; bill strongly hooked'.

7. Cabanis & Heine (1859, p. 72) described and named *Contopus pertinax* from Xalapa (= Jalapa, Mexico). The location of the holotype, formerly in the Museum Heineanum, is unknown (see Miller, Friedmann, Griscom & Moore, 1957, p. 95).

8. Historic valid use of the name *Contopus musicus* (Swainson, 1827), for the tyrant flycatcher that is currently universally called *Contopus pertinax* Cabanis & Heine, 1859, is limited to Swainson (1832, p. 132), Salvin & Godman (1880, pp. 81–82), Sharpe (1901, p. 141) and Dubois (1903, p. 1078). Ridgway (1907, p. 514) listed *musica* Swainson as a possible synonym of *pertinax*. Hellmayr (1927, p. 203) remarked that Swainson's (1827) description of *musica* 'appears to me unidentifiable'.

9. Phillips (in Phillips, Marshall & Monson, 1964, p. 90) adopted the name *Tyrannula musica* in place of the well known *T. pertinax* without explanation. Later Phillips (in Phillips & Short, 1968, pp. 91–93) reported the discovery of the type of Swainson's *Tyrannula musica*. He stated that 'both the description [by Swainson] and the name itself apply so clearly to this species' but did not provide further details. A specimen (catalog no. 27/Tyr/57/e/1 in the University Museum of Zoology, Cambridge, U.K.), considered to be the type of *Tyrannula musica* by A.R. Phillips in 1966, has the locality 'Mexico'. This specimen, according to notes by C.W. Benson, was considered by Phillips to be a Bullock specimen and therefore from Swainson's collection (in litt., R.J. Symonds). There is, however, no label to indicate that the specimen had belonged to Swainson. Measurements of the specimen taken by Phillips

in 1966 do not agree with those given by Swainson (1827, p. 368): wing 100 mm ('4.'=108.1 mm in Swainson); tail 83 mm ('3⅜'=89 mm in Swainson).

10. Recent use of Swainson's name *musica* in the genus *Contopus* has been only by Phillips (in Phillips et al., 1964, p. 90; in Phillips & Short, 1967, pp. 91–93; in Monson & Phillips, 1981). Except as noted in paras. 8 and 9 above, all other authors use the specific name *pertinax* Cabanis & Heine. Examples of recent works demonstrating this usage include Miller, Friedmann, Griscom & Moore (1957, p. 84), A.O.U. (1957, p. 347; 1983, pp. 447 448), Davis (1972, p. 139), Russell (1964, p. 122), Monroe (1968, p. 265), Binford (1989, p. 176) and Sibley & Monroe (1990, p. 352). Wolters (1977, p. 177) listed *musica* Swainson as a nomen dubium. Traylor (1979, p. 129, footnote) considered *musica* Swainson, 1827 a nomen oblitum. We propose that the usage of *Contopus pertinax* Cabanis & Heine, 1859 be maintained by the suppression of *Tyrannula musica* Swainson, 1827.

11. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the following specific names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
   (a) *pusillus* Swainson, 1827, as published in the binomen *Platyrhynchus pusillus*;
   (b) *musica* Swainson, 1827, as published in the binomen *Tyrannula musica*;

(2) to place on the Official List of Specific Names in Zoology the following names:
   (a) *minima* Baird & Baird, 1843, as published in the binomen *Tyrannula minima*;
   (b) *pertinax* Cabanis & Heine, 1859, as published in the binomen *Contopus pertinax*;

(3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the following names:
   (a) *pusillus* Swainson, 1827, as published in the binomen *Platyrhynchus pusillus* and as suppressed in (1)(a) above;
   (b) *musica* Swainson, 1827, as published in the binomen *Tyrranula musica* and as suppressed in (1)(b) above.

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**Comments on the proposal to remove the homonymy between PLUTONIINAE Bollman, 1893 (Arthropoda, Chilopoda) and PLUTONIINAE Cockerell, 1893 (Mollusca, Gastropoda)**
(Case 2946; see BZN **52**: 150–152)

(1) Philippe Bouchet

*Muséum national d'Histoire naturelle, 55 rue de Buffon, 75005 Paris, France*

The application by Drs Shelley and Backeljau states that the subfamily PLUTONIINAE Bollman, based on the myriapod genus *Plutonium* Cavanna, 1881, is deemed to have been established on 30 November 1893, whilst PLUTONIINAE Cockerell, based on the snail genus *Plutonia* Morelet in Stabile, 1864, is dated 21 December 1893 and is thus the junior homonym.

However, an examination of the serial *The Conchologist* shows that vol. 2, part 8, in which the name PLUTONIINAE Cockerell was introduced (p. 186), was published on 31 October 1893. The blue wrapper of that issue, comprising pp. 185–232, bears the inscription: 'Double Number. December 21st, 1893. (Published October 31st)'.

This reverses the priority of the two names and PLUTONIINAE Cockerell has one month's priority over PLUTONIINAE Bollman.

(2) Thierry Backeljau

*Koninklijk Belgisch Instituut voor Natuurwetenschappen, Vautierstraat 29, B-1040 Brussels, Belgium*

Rowland M. Shelley

*North Carolina State Museum of Natural Sciences, P.O. Box 29555, Raleigh, North Carolina 27626–0555, U.S.A.*

Dr Bouchet has pointed out (above) that the molluscan family-group name PLUTONIINAE Cockerell was published on 31 October 1893, and not 21 December 1893 as stated in our application. The myriapod name PLUTONIINAE Bollman thus becomes the junior homonym.

In preparing our application one of us saw only a copy of Cockerell's paper and not the wrapper of the issue of *The Conchologist*, whilst the other unfortunately missed the small print at the top of the cover giving the date of publication.

The most logical and convenient solution now to this problem of homonymy is to amend the myriapod name to PLUTONIUMINAE under the Commission's plenary powers, whilst retaining the mollusc name unchanged as PLUTONIINAE, and we formally propose this.

**Comments on the proposed conservation of the generic name *Glomeris* Latreille, 1802 (Diplopoda) and the specific name of *Armadillo vulgaris* Latreille, 1804 (Crustacea, Isopoda), and the application for a ruling on the status of the name *Armadillo* Latreille, 1802 (Crustacea, Isopoda)**
(Case 2909; see BZN **52**: 236–244)

The following comments have been received from members of the Nomenclature Committee of The Crustacean Society.

(1) Marcos Tavares
*Instituto de Biologia, Universidade Santa Ursula, Rio de Janeiro, 22231-045 Brazil*

The history of this case has been set out by Profs Lehtinen and Holthuis. The unused name *Armadillo* Cuvier, 1792 (Diplopoda) threatens two much-used names: *Armadillo* Latreille, (1802) (Isopoda) as a senior homonym and *Glomeris* Latreille, 1802 (Diplopoda) as a senior synonym. *Pentheus* C.L. Koch, [1841] is the next available name to replace *Armadillo* Latreille but has been used only once (by Dahl, 1916; see para. 14 of the application). The authors of the application agree that *Armadillo* Cuvier should be suppressed; however, they do not share the same view on whether the name *Armadillo* Latreille should be maintained, and advocate different solutions to this problem.

Prof Lehtinen proposes that *Armadillo* Cuvier be suppressed for priority but not homonymy, and that *Armadillo* Latreille be replaced by *Pentheus*. Prof Holthuis advocates that *Armadillo* Cuvier be suppressed for priority and also homonymy, so conserving *Armadillo* Latreille; he records that the latter has been well used and there is a family-group name based on it, whereas *Pentheus* has been used only once.

I believe that Prof Holthuis's proposal will best serve stability and universality of nomenclature. It is a much simpler solution, it preserves a name that has been much used, and it avoids unecessarily reintroducing the name *Pentheus* which was used for the only time in 1916.

(2) Gary C.B. Poore
*Museum of Victoria, 71 Victoria Crescent, Abbotsford, Victoria 3067, Australia*

This is a complex case and one in which a strict application of the Code would cause great confusion. There is a real chance that a ruling in favour of *Pentheus* would be largely ignored by those ecologists and physiologists with little interest in the intricacies of the rules of zoological nomenclature.

I am in favour, therefore, of following the recommendations of Prof Holthuis and conserving *Armadillo* Latreille, 1802.

(3) A.B. Williams
*NOAA/NMFS Systematics Laboratory, NHB 163, Smithsonian Institution, Washington, D.C. 20560, U.S.A.*

Profs P.T. Lehtinen and L.B. Holthuis discuss the bewildering history of generic and specific names that date from Linnaeus (1758), involving composite concepts, neglect, substitution, use and disuse, changes in rules, homonymy and synonymy, together with placement on and withdrawal from the Official List. Anchorage of names to originally described material is impossible.

The proposal to conserve the generic name *Glomeris* Latreille, 1802 (Diplopoda, a conglobating millipede) and the specific name of *Armadillo vulgaris* Latreille, 1804 (Isopoda, a conglobating woodlouse) by the suppression of long-disused senior synonyms seems well supported and favoured.

*Armadillo* Latreille, 1802 has long been in use, with three, four or more papers listed every year and a family name based on it, though it is formally invalid unless conserved by the Commission. If not, it would be replaced by the synonym *Pentheus* C.L. Koch, [1841], used only once (Dahl, 1916) since proposed; there is no family-group name based on it. In essence, the case concerns the strict priority of a generic name which has been used only twice in over 150 years, or the conservation of a name used repeatedly for nearly 200 years. I support the conservation of *Armadillo* Latreille, 1802.

**Comments on the proposed conservation of the generic names *Monstrilla* Dana, 1849 and *Thaumaleus* Krøyer, 1849 (Crustacea, Copepoda)**
(Case 2894; see BZN **52**: 245–249)

(1) David M. Damkaer
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I agree with Dr Grygier that retaining the essentially unused name *Thaumatoessa* Krøyer in Gaimard, [1842] would jeopardize the established nomenclature of these parasitic copepods. In 1849 the author himself rejected the name by giving a new generic name, *Thaumaleus*, to the same specimen. Krøyer did not comment on the name change but he was enamoured with Greek and perhaps perceived some subtle difficulty with grammar or usage.

Krøyer's name *Thaumatoessa* predates Dana's (1849) widely used name *Monstrilla* and, as proposed in the application, should be suppressed to retain stability in Monstrilloida nomenclature. Krøyer's (1849) later and well-used name *Thaumaleus* will also be conserved for use by those who separate this taxon from *Monstrilla*.

The name *Thaumatoessa* Krøyer is of uncertain date but was likely published between 1842 and 1845. Damkaer & Damkaer (1979) chose 1845 as the most conservative date for publication, even though evidence pointed mainly toward an earlier date (para. 1 of the application). Regardless of which date is accepted, the problem with *Thaumatoessa* remains and its seniority relative to *Monstrilla* and *Thaumaleus* is unchanged.

The following comments have been received from members of the Nomenclature Committee of The Crustacean Society.

(2) A.B. Williams
*NOAA/NMFS Systematics Laboratory, NHB 163, Smithsonian Institution, Washington, DC 20560, U.S.A.*

M.J. Grygier has pointed out the almost complete disuse of the name *Thaumatoessa* Krøyer, [1842], which was based on an illustration. There were only three uses of the name for copepods in the period 1842–1868. *Monstrilla* Dana, 1849, the name for the type genus of the MONSTRILLIDAE and the Monstrilloida, is in current

worldwide use. The genus contains more than 50 species. The name *Thaumaleus* Kroyer, 1849 has appeared in some 50 publications over the last 100 years, with increasing frequency through time.

Acknowledging the almost complete obscurity of the unused senior name, the application is justified, the long-term frequent use of its synonyms being the criterion of acceptability.

(3) Gary C.B. Poore
*Museum of Victoria, 71 Victoria Crescent, Abbotsford, Victoria 3067, Australia*

This is a clear case of a virtually unknown generic name having priority over *Monstrilla*, which is in wide use and is the basis of family, superfamily and order names. I support the proposal to suppress *Thaumatoessa* Kroyer in Gaimard, [1842] in favour of *Monstrilla* Dana, 1849.

**Comments on the proposed conservation of the specific names of *Aphodius rufus* (Moll, 1782), *A. foetidus* (Herbst, 1783) and *Aegialia rufa* (Fabricius, 1792) (Insecta, Coleoptera)**
(Case 2878; see BZN **51**: 121–127, 340–341; **52**: 71–73)

(1) Przemyslaw Szwalko
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As a non-taxonomist interested in stabilization of the nomenclature for the species currently known by the names *Aphodius rufus* (Moll, 1782), *A. foetidus* (Herbst, 1783) and *Aegialia rufa* (Fabricius, 1792), I would like to support the majority of the arguments put forward in the application by Drs Krell, Stebnicka and Holm (BZN **51**: 121–127), and to agree with Krell's subsequent comment (BZN **52**: 72–73) with the exception of para. 5. I also share Dr Stebnicka's general view on the stability of these names (BZN **52**: 73).

The alternative solutions to this problem of homonymy, put forward by Dellacasa (BZN **51**: 340–341) and by Silfverberg (BZN **52**: 71–72), however logical, cannot be easily accepted for all the taxa. I should therefore like to ask the Commission to make a ruling taking into account the following comments.

1. The name for the species known as *Dischista rufa* (De Geer, 1778), published as *Scarabaeus rufus*, is stable and need not be further discussed.

2. The name *Aphodius rufus* (Moll, 1782) refers to a well known, widely distributed and common representative of the subfamily APHODIINAE. Besides taxonomic works it is very often mentioned in ecological and faunistic papers. Under this name it is listed in many keys and catalogues used by non-specialists. Therefore I fully support the application to conserve this name.

3. Use of the name *Aphodius scybalarius* auct. in the taxonomic sense of *A. foetidus* (Herbst, 1783) would cause much confusion since *scybalarius* Fabricius, 1781 is also in use as a senior synonym of *A. rufus* (Moll, 1782). Papers cited by Silfverberg (BZN

**52**: 71–72) are proof of this. However, many additional papers could be cited in which the well known species is referred to under the name *foetidus*, as noted in para. 6 of the application.

4. *Aegialia rufa* (Fabricius, 1792) is not the sole name for the species commonly mentioned in faunistic and ecological papers, as well as those concerning applied entomology. As a species collected sporadically it is known to specialists under both the names *A. rufa* and *A. spissipes* (LeConte, 1878) (para. 7 of the application). For this reason I agree with Dellacasa, Silfverberg and the Code that the first available synonym, *spissipes*, should be adopted for this taxon.

(2) Frank-Thorsten Krell
*Theodor-Boveri-Institut für Biowissenschaften der Universität, Lehrstuhl Zoologie III, Am Hubland, D-97074 Würzburg, Germany*

I should like to put forward some information on the usages of the names *Aphodius rufus* (Moll, 1782) and *Aphodius scybalarius* (Fabricius, 1781) in addition to that given in my joint application (BZN **51**: 121–127) and subsequent comment (BZN **52**: 72–73).

In addition to the references cited in the application (para. 6) I have found a further one (Costessèque, 1993, p. 124) in which *Aphodius scybalarius* has been used in the sense of *Aphodius foetidus* (Herbst, 1783). Hence the name *Aphodius scybalarius* is still in use for two different species. Article 51a of the Code states that citation of the author of the name for a taxon is optional. However, without citing the author's name the binomen *Aphodius scybalarius* is ambiguous and it has therefore lost all usefulness as the name for a species.

To illustrate how common the name *Aphodius rufus* (Moll, 1782) is I have given the Commission Secretariat a list of 54 references by 53 authors since 1990 in which it is used as valid. The senior authors of these references are from Austria, Czech Republic, France, Georgia, Germany, Great Britain, Hungary, Ireland, Italy, Netherlands, Poland and Switzerland. The publications deal with different aspects of biology. Most of them are faunistic but the list also includes works that are veterinary, ecological, agricultural, conservational, comprehensive regional or national faunal lists and identification keys. It is clear that *Aphodius rufus* (Moll) is a name that is well known, and frequently used in different branches of biology, as noted by Stebnicka (BZN **52**: 73). The continued usage of *Aphodius rufus* (Moll) clearly results neither from national tradition nor from adherence to a single influential reference work.

Prior to 1990 the name *Aphodius rufus* (Moll) was used just as frequently, with the exception only of the 11 citations mentioned in our application (BZN **51**: 123) and those listed by Silfverberg (BZN **52**: 71). After Landin (1956) discovered the true identity of *Aphodius scybalarius* (Fabricius, 1781) and emphasized that this name should not be used (para. 3 of the application), only Silfverberg (1977, 1979) used it before Stebnicka in 1979 submitted an application to conserve *Aphodius rufus* (Moll) by suppressing *Scarabaeus scybalarius*. Unfortunately this application was not published until 1984 (BZN **41**: 265–266) because there was at that time some doubt over the availability of the earliest homonym *Scarabaeus rufa* De Geer, 1778. During this delay G. Dellacassa (1983) published his influential monograph on Italian

APHODIINI; he dealt with Landin's (1956) discovery at some length but did not follow the latter's recommendation to maintain the usage of *Aphodius rufus* and adopted *scybalarius* (para. 4 of the application).

Article 80a of the Code states that existing usage (i.e. *Aphodius rufus* (Moll)) is to be maintained when a case is under consideration by the Commission. Stebnicka's (1984) application has never been resolved but in the meantime some authors have unfortunately, and in the face of nomenclatural stability, used *Aphodius scybalarius* in the sense of *Aphodius rufus*. This usage should not now be legalized by accepting it as established. Furthermore, *Aphodius scybalarius* in the sense of *Aphodius rufus* Moll is not the only sense in which this name has been used, as I have shown above.

In summary, I reiterate that approval of our application will result in an unambiguous and stable nomenclature for these scarabid species.

**Additional reference**

**Costessèque, R.** 1993. Coprophages d'une vallée du Piémont pyrénéen: le Pays d'Olmes (Coleoptera Scarabaeoidea Laparosticti). *Entomologiste*, **49**: 121–125.

**Comment on the proposed conservation of usage of 15 mammal specific names based on wild species which are antedated by or contemporary with those based on domestic animals**
(Case 3010; see BZN **53**: 28–37)

Richard H. Meadow
*Zooarchaeology Laboratory, Peabody Museum of Archaeology and Ethnology, Harvard University, 11 Divinity Avenue, Cambridge, Massachusetts 02138, U.S.A.*

I write as a member of the Executive Committee of the International Council for Archaeozoology. I have been delegated to pass on the following official declaration.

At a meeting on 9 September 1995 held at Basel, Switzerland, the International Committee of the ICAZ voted to strongly support the application of Juliet Clutton-Brock, Anthea Gentry and Colin Groves (see para. 9 of the application). Names based by Linnaeus (1758, 1766) and some other authors on domestic animals should emphatically not be used for wild animals.

# OPINION 1834

## *Fursenkoina* Loeblich & Tappan, 1961 (Foraminiferida): conserved

**Keywords.** Nomenclature; taxonomy; Foraminiferida; *Fursenkoina*.

**Ruling**

(1) Under the plenary powers the name *Cassidella* Hofker, 1953 is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.

(2) The name *Fursenkoina* Loeblich & Tappan, 1961 (gender: feminine), type species by monotypy of the replaced nominal genus *Virgulina* d'Orbigny, 1826, *Virgulina squammosa* d'Orbigny, 1826, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *squammosa* d'Orbigny, 1826, as published in the binomen *Virgulina squammosa* and as defined by the neotype (specimen no. P 52796 in the Micropalaeontology Collections in the Natural History Museum, London) designated by Revets (1995) (specific name of the type species of *Fursenkoina* Loeblich & Tappan, 1961), is hereby placed on the Official List of Specific Names in Zoology.

(4) The name *Cassidella* Hofker, 1953, as suppressed in (1) above, is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology.

**History of Case 2809**

An application for the conservation of the generic name *Fursenkoina* Loeblich & Tappan, 1961 was received from Dr Stefan A. Revets (*The University of Western Australia, Perth, Australia*) on 15 February 1991. After correspondence the case was published in BZN **51**: 98–101 (June 1994). Notice of the case was sent to appropriate journals.

A comment in support from Prof John R. Haynes (*Institute of Earth Studies, University of Wales, Aberystwyth, Dyfed, Wales, U.K.*) was published in BZN **52**: 175 (June 1995).

It was noted on the voting paper that support had also been received from Dr Fred Rögl (*Naturhistorisches Museum, Vienna, Austria*), who wrote: 'I think there is a clear case for those of us working with Foraminiferida to keep the genus *Fursenkoina*'.

Publication of Dr Revets's paper in the *Bulletin of the Natural History Museum, London* (Geology), in which he intended (para. 9(3) of the application) to designate a neotype for *Virgulina squammosa* d'Orbigny, 1826, the type species of *Fursenkoina* Loeblich & Tappan, 1961, was delayed. Dr Revets therefore described and designated the neotype in BZN **52**: 176 (June 1995).

**Decision of the Commission**

On 1 December 1995 the members of the Commission were invited to vote on the proposals published in BZN **51**: 100–101. At the close of the voting period on 1 March 1996 the votes were as follows:

Affirmative votes — 26: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Starobogatov, Štys, Trjapitzin

Negative votes — none.

**Original references**

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:
*Cassidella* Hofker, 1953, *The Micropaleontologist*, **7**(1): 26.
*Fursenkoina* Loeblich & Tappan, 1961, *Journal of Paleontology*, **35**: 314.
*squammosa*, *Virgulina*, d'Orbigny, 1826, *Annales des Sciences Naturelles*, **7**: 267.
*Virgulina* d'Orbigny, 1826, *Annales des Sciences Naturelles*, **7**: 267.

The following is the reference for the designation of the neotype of *Virgulina squammosa* d'Orbigny, 1826:
**Revets, S.A.** 1995. BZN **52**: 176.

# OPINION 1835

## *Vejdovskyella* Michaelsen, 1903 (Annelida, Oligochaeta): given precedence over *Macrochaetina* Bretscher, 1899

**Keywords.** Nomenclature; taxonomy; Annelida; Oligochaeta; *Macrochaetina*; *Vejdovskyella*.

**Ruling**

(1) Under the plenary powers the generic name *Vejdovskyella* Michaelsen, 1903 is hereby given precedence over *Macrochaetina* Bretscher, 1899 whenever the two names are considered to be synonyms.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:

(a) *Vejdovskyella* Michaelsen, 1903 (gender: feminine), type species by monotypy of the replaced nominal genus *Bohemilla* Vejdovský, 1883, *Bohemilla comata* Vejdovský, 1883, with the endorsement that it is to be given precedence over *Macrochaetina* Bretscher, 1899 whenever the two names are considered to be synonyms;

(b) *Macrochaetina* Bretscher, 1899 (gender: feminine), type species by monotypy of the replaced nominal genus *Macrochaeta* Bretscher, 1896, *Macrochaeta intermedia* Bretscher, 1896, with the endorsement that it is not to be given priority over *Vejdovskyella* Michaelsen, 1903 whenever the two names are considered to be synonyms.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *comata* Vejdovský, 1883, as published in the binomen *Bohemilla comata* (specific name of the type species of *Vejdovskyella* Michaelsen, 1903);

(b) *intermedia* Bretscher, 1896, as published in the binomen *Macrochaeta intermedia* (specific name of the type species of *Macrochaetina* Bretscher, 1899).

(4) The following names are hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology:

(a) *Bohemilla* Vejdovský, 1883 (a junior homonym of *Bohemilla* Barrande, 1872 and a senior objective synonym of *Vejdovskyella* Michaelsen, 1903);

(b) *Bohemillula* Strand, 1928 (a junior objective synonym of *Vejdovskyella* Michaelsen, 1903);

(c) *Macrochaeta* Bretscher, 1896 (a junior homonym of *Macrochaeta* Grube, 1850 and a senior objective synonym of *Macrochaetina* Bretscher, 1899).

**History of Case 2908**

An application for the conservation of the generic name *Vejdovskyella* Michaelsen, 1903 by giving it precedence over *Macrochaetina* Bretscher, 1899 was received from Dr Tarmo Timm (*Võrtsjärv Limnological Station, Tartumaa, Estonia*) on 29 October 1993. After correspondence the case was published in BZN **51**: 302–303 (December 1994). Notice of the case was sent to appropriate journals.

**Decision of the Commission**

On 1 December 1995 the members of the Commission were invited to vote on the proposals published in BZN **51**: 303. At the close of the voting period on 1 March 1996 the votes were as follows:

Affirmative votes — 19: Bayer, Bock, Cocks, Cogger, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kraus, Mahnert, Martins de Souza, Nielsen, Nye, Ride, Savage, Schuster, Starobogatov

Negative votes — 7: Bouchet, Kabata, Lehtinen, Macpherson, Minelli, Štys and Trjapitzin.

Bouchet commented: 'In my view the application fails to demonstrate usage of the name *Vejdovskyella* outside a small field of specialist literature. Priority should apply'.

**Original references**

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

*Bohemilla* Vejdovský, 1883, *Sitzungsberichte der Königlichen Böhmischen Gesellschaft der Wissenschaften* (Prag), **1883**: 218.

*Bohemillula* Strand, 1928, *Archiv für Naturgeschichte*, **92**(A, 8): 36.

*comata*, *Bohemilla*, Vejdovský, 1883, *Sitzungsberichte der Königlichen Böhmischen Gesellschaft der Wissenschaften* (Prag), **1883**: 218.

*intermedia*, *Macrochaeta*, Bretscher, 1896, *Revue Suisse de Zoologie*, **3**(4): 509.

*Macrochaeta* Bretscher, 1896, *Revue Suisse de Zoologie*, **3**(4): 509.

*Macrochaetina* Bretscher, 1899, *Revue Suisse de Zoologie*, **6**(2): 392.

*Vejdovskyella* Michaelsen, 1903, *Mitteilungen aus dem Naturhistorischen Museum in Hamburg*, **19**(2): 184.

# OPINION 1836

## *Scottia* Brady & Norman, 1889 (Crustacea, Ostracoda): *Scottia pseudobrowniana* Kempf, 1971 designated as the type species

**Keywords.** Nomenclature; taxonomy; Crustacea; Ostracoda; *Scottia*; *Scottia pseudobrowniana*.

**Ruling**

(1) Under the plenary powers all previous fixations of type species for the nominal genus *Scottia* Brady & Norman, 1889 are hereby set aside and *Scottia pseudobrowniana* Kempf, 1971 is designated as the type species.

(2) The name *Scottia* Brady & Norman, 1889 (gender: feminine), type species by designation under the plenary powers in (1) above *Scottia pseudobrowniana* Kempf, 1971, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *pseudobrowniana* Kempf, 1971, as published in the binomen *Scottia pseudobrowniana* (specific name of the type species of *Scottia* Brady & Norman, 1889) is hereby placed on the Official List of Specific Names in Zoology.

**History of Case 2896**

An application for the designation of *Scottia pseudobrowniana* Kempf, 1971 as the type species of *Scottia* Brady & Norman, 1889 was received from Prof Eugen K. Kempf (*Geological Institute, University at Cologne, Köln, Germany*) on 1 June 1993. After correspondence the case was published in BZN **51**: 304–305 (December 1994). Notice of the case was sent to appropriate journals.

A comment in support from Dr Henri J. Oertli (*Bizanos, France*) was published in BZN **52**: 178 (June 1995), together with a note of support from Dr Claude Meisch (*Musée d'Histoire Naturelle, Luxembourg*) and Dr I.G. Sohn (*National Museum of Natural History, Smithsonian Institution, Washington, D.C., U.S.A.*).

A further comment in support from Dr Renate Matzke-Karasz (*Kassel, Germany*) was published in BZN **52**: 263 (September 1995).

A comment in support from Dr Koen Martens (*Royal Belgian Institute of Natural Sciences, Brussels, Belgium*), received during the voting period, noted: 'Dr C. Meisch is currently preparing a revised edition of the Ostracoda volume in the series *Die Tierwelt Mitteleuropas*, which will replace the widely known book by Klie (1938), and which will be the identification guide for European ostracods for decades to come. It is important that the type species of *Scottia*, which has already created much confusion in the past between neontological and palaeontological ostracodologists, is sorted out for inclusion in this new guide. *Scottia* is the type genus of the subfamily SCOTTIINAE Bronstein, 1947 in the family CYPRIDIDAE'.

Klie, W. 1938. Ostracoda, Muschelkrebse. *In* Dahl, F. (Ed.), *Die Tierwelt Deutschlands und Angrenzenden Meeresteile*, **34**(3): 1–230.

**Decision of the Commission**

On 1 December 1995 the members of the Commission were invited to vote on the proposals published in BZN **51**: 305. At the close of the voting period on 1 March 1996 the votes were as follows:

Affirmative votes — 25: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Starobogatov, Štys, Trjapitzin

Negative votes — 1: Holthuis.

**Original references**

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

*pseudobrowniana*, *Scottia*, Kempf, 1971, *Eiszeitalter und Gegenwart*, **22**: 45.

*Scottia* Brady & Norman, 1889, *Scientific Transactions of the Royal Dublin Society*, (2)**4**(2): 72.

# OPINION 1837

## *Oniscus asellus asellus* Linnaeus, 1758 (Crustacea, Isopoda): neotype designated

**Keywords.** Nomenclature; taxonomy; Crustacea; Isopoda; woodlice; *Oniscus asellus*.

### Ruling

(1) Under the plenary powers all previous fixations of type specimens for the nominal subspecies *Oniscus asellus asellus* Linnaeus, 1758 are hereby set aside and the male specimen (catalogue no. 1994.3341 in the Crustacea Section of the Natural History Museum, London) from the Linneträdgården, Uppsala, Sweden, is designated as the neotype.

(2) The entry for *Oniscus* Linnaeus, 1758 on the Official List of Generic Names in Zoology is hereby amended to record that *O. asellus* was designated as the type species by Audouin (1823).

(3) To the entry for *Oniscus asellus* Linnaeus, 1758 on the Official List of Specific Names is hereby added the endorsement that it is defined by the neotype designated in (1) above.

### History of Case 2844

An application to designate a neotype for *Oniscus asellus* Linnaeus, 1758 was received from Dr David T. Bilton (*University of York, Heslington, York, U.K.*) on 3 February 1992. After correspondence the case was published in BZN **51**: 227–229 (September 1994). Notice of the case was sent to appropriate journals.

It was noted on the voting paper that support for the application was received from Prof L.B. Holthuis (*Nationaal Natuurhistorisch Museum, Leiden, The Netherlands*).

It was also noted that the male holotype from Lydford Gorge, Devon, U.K., of *Oniscus asellus occidentalis* Bilton, 1994 is numbered 1994.3350 in the Crustacea Section of the Natural History Museum, London (para. 8 of the application).

The name *Oniscus* Linnaeus, 1758, and that of its type species *Oniscus asellus* Linnaeus, 1758, were placed on Official Lists in Opinion 104 (September 1928). However, the identity of possible type material of *O. asellus* was not then considered.

### Decision of the Commission

On 1 December 1995 the members of the Commission were invited to vote on the proposals published in BZN **51**: 228–229. At the close of the voting period on 1 March 1996 the votes were as follows:

Affirmative votes — 26: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Starobogatov, Štys, Trjapitzin

Negative votes — none.

### Original references

The following are the original references to the names on Official Lists, entries amended or endorsed by the ruling given in the present Opinion:

*asellus*, *Oniscus*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 637.
*Oniscus* Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 636.

The following is the reference for the designation of *Oniscus asellus* Linnaeus, 1758 as the type species of the nominal genus *Oniscus* Linnaeus, 1758:

**Audouin, J.V.** 1823. Cloporte. *Oniscus*. *In* Bory de Saint-Vincent, J.B.G.M. (Ed.), *Dictionnaire classique d'histoire naturelle*, vol. 4, p. 222.

# OPINION 1838

## *Temnorhynchus* Hope, 1837 (Insecta, Coleoptera): conserved

**Keywords.** Nomenclature; taxonomy; Coleoptera; *Temnorhynchus*.

**Ruling**

(1) Under the plenary powers the name *Coptorhinus* Dejean, 1833 is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.

(2) The name *Temnorhynchus* Hope, 1837 (gender: masculine), type species by monotypy of the replaced nominal genus *Coptorhinus* Dejean, 1833, *Scarabaeus retusus* Fabricius, 1781, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *retusus* Fabricius, 1781, as published in the binomen *Scarabaeus retusus* (specific name of the type species of *Temnorhynchus* Hope, 1837), is hereby placed on the Official List of Specific Names in Zoology.

(4) The following names are hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology:

(a) *Coptorhinus* Dejean, 1833, as suppressed in (1) above;

(b) *Coptorhinus* Guérin Méneville, [1838] (Coleoptera; a junior homonym of *Coptorhinus* Dejean, 1833).

**History of Case 2893**

An application for the conservation of the generic name *Temnorhynchus* Hope, 1837 was received from Dr Frank-Thorsten Krell (*Eberhard-Karls-Universität, Zoologisches Institut, Lehrstuhl für Spezielle Zoologie, Tübingen, Germany*) on 10 May 1993. After correspondence the case was published in BZN **51**: 306–308 (December 1994). Notice of the case was sent to appropriate journals.

**Decision of the Commission**

On 1 December 1995 the members of the Commission were invited to vote on the proposals published in BZN **51**: 307. At the close of the voting period on 1 March 1996 the votes were as follows:

Affirmative votes — 25: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Starobogatov, Štys, Trjapitzin

Negative votes — 1: Kabata.

**Original references**

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

*Coptorhinus* Dejean, 1833, *Catalogue des coléoptères de la collection de M. le Comte Dejean*, Ed. 2, part 2, p. 152.

*Coptorhinus* Guérin Méneville, [1838], Crustacés, arachnides et insectes. *In* Duperrey, L.I. (Ed.), *Voyage autour du monde ... sur la corvette de Sa Majesté*, La Coquille, *pendant les années 1822, 1823, 1824 et 1825* ... Zoologie, vol. 2, part 2, p. 72.

*retusus*, *Scarabaeus*, Fabricius, 1781, *Species insectorum exhibentes eorum differentias specificas synonyma auctorum* ..., vol. 1, p. 14.

*Temnorhynchus* Hope, 1837, *The coleopterist's manual, containing the lamellicorn insects of Linneus* [sic] *and Fabricius*, p. 47.

# OPINION 1839

## *Coproica* Rondani, 1861 and *Ischiolepta* Lioy, 1864 (Insecta, Diptera): conserved by the designation of *Limosina acutangula* Zetterstedt, 1847 as the type species of *Coproica*

**Keywords.** Nomenclature; taxonomy; Diptera; SPHAEROCERIDAE; *Coproica*; *Ischiolepta*.

**Ruling**

(1) Under the plenary powers all previous fixations of type species for the nominal genus *Coproica* Rondani, 1861 are hereby set aside and *Limosina acutangula* Zetterstedt, 1847 is designated as the type species.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:

(a) *Coproica* Rondani, 1861 (gender: feminine), type species by designation under the plenary powers in (1) above *Limosina acutangula* Zetterstedt, 1847;

(b) *Ischiolepta* Lioy, 1864 (gender: feminine), type species by monotypy *Borborus denticulatus* Meigen, 1830.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *acutangula* Zetterstedt, 1847, as published in the binomen *Limosina acutangula* (specific name of the type species of *Coproica* Rondani, 1861);

(b) *denticulatus* Meigen, 1830, as published in the binomen *Borborus denticulatus* (specific name of the type species of *Ischiolepta* Lioy, 1864).

(4) The name *Heteroptera* Macquart, 1835 is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology (a senior objective synonym of *Coproica* Rondani, 1861 and a junior homonym of *Heteroptera* Rafinesque, 1814).

**History of Case 2917**

An application for the conservation of the generic names *Coproica* Rondani, 1861 and *Ischiolepta* Lioy, 1864 by the designation of *Limosina acutangula* Zetterstedt, 1847 as the type species of *Coproica* was received from Dr Terry A. Wheeler (*University of Guelph, Guelph, Ontario, Canada*) and Dr John E. Swann (*The Royal Ontario Museum, Toronto, Ontario, Canada*) on 23 November 1993. After correspondence the case was published in BZN **51**: 316–319 (December 1994). Notice of the case was sent to appropriate journals.

**Decision of the Commission**

On 1 December 1995 the members of the Commission were invited to vote on the proposals published in BZN **51**: 317–318. At the close of the voting period on 1 March 1996 the votes were as follows:

Affirmative votes — 26: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Starobogatov, Štys, Trjapitzin

Negative votes — none.

**Original references**

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

*acutangula*, *Limosina*, Zetterstedt, 1847, *Diptera Scandinaviae disposita et descripta*, vol. 6, p. 2499.

*Coproica* Rondani, 1861, *Dipterologiae italicae prodromus. Species Italicae ordinis Dipterorum...*, vol. 4, p. 10.

*denticulatus*, *Borborus*, Meigen, 1830, *Systematische Beschreibung der bekannten europäischen zweiflügeligen Insekten*, vol. 6, p. 200.

*Heteroptera* Macquart, 1835, *Histoire naturelle des insectes*. Diptères, vol. 2, p. 570.

*Ischiolepta* Lioy, 1864, *Atti dell'Istituto Veneto di Scienze, Lettere ed Arti*, (3)9(2): 1112.

# OPINION 1840

## *Bagrus hoevenii* Bleeker, 1846 (currently *Hemibagrus hoevenii*; Osteichthyes, Siluriformes): neotype designated

**Keywords.** Nomenclature; taxonomy; Osteichthyes; Siluriformes; catfish; *Hemibagrus hoevenii*.

**Ruling**

(1) Under the plenary powers all previous fixations of type specimens for the nominal species *Bagrus hoevenii* Bleeker, 1846 are hereby set aside and specimen no. ZRC 37472 in the Zoological Reference Collection at the Department of Zoology, National University of Singapore, is designated as the neotype.

(2) The name *hoevenii* Bleeker, 1846, as published in the binomen *Bagrus hoevenii* and as defined by the neotype designated in (1) above, is hereby placed on the Official List of Specific Names in Zoology.

**History of Case 2934**

An application for the designation of a neotype for *Bagrus hoevenii* Bleeker, 1846 was received from Dr Maurice Kottelat (*Cornol, Switzerland*) and Dr Kelvin K.P. Lim & Dr Peter K.L. Ng (*National University of Singapore, Republic of Singapore*) on 11 April 1994. After correspondence the case was published in BZN **51**: 320–322 (December 1994). Notice of the case was sent to appropriate journals.

**Decision of the Commission**

On 1 December 1995 the members of the Commission were invited to vote on the proposals published in BZN **51**: 322. At the close of the voting period on 1 March 1996 the votes were as follows:

Affirmative votes — 22: Bayer, Bock, Cocks, Cogger, Corliss, Hahn, Halvorsen, Heppell, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Ride, Savage, Starobogatov, Štys, Trjapitzin

Negative votes — 4: Bouchet, Dupuis, Holthuis and Schuster.

Bouchet commented: 'The authors of the application have demonstrated that Bleeker's material in Leiden is a mixture of non-type and possibly-type specimens, of several species of *Bagrus* including *hoevenii*, and probably of specimens from Java, Sumatra and Borneo. I approve their decision to designate a neotype to stabilize the name *Bagrus hoevenii*. However, for the designation to be convincing, evidence should be given that the neotype is conspecific with Bleeker's original concept of *hoevenii*, based on his description and type locality. This might be the case with their neotype from Peninsular Malaysia, but I am disturbed by the statement (para. 5 of the application) that the authors 'have been unable to find recent specimens from Java (the type locality) referable to *B. hoevenii*'. This could indicate that *B. hoevenii* has become extinct on Java and that their neotype designation is the best course of action to stabilize the name, or it could mean that their '*hoevenii*' from Peninsular Malaysia is not conspecific with Bleeker's original *hoevenii*. Until this point is discussed I find it appropriate to vote against the proposed neotype designation'.

Dupuis also voted against because the proposed neotype was not from Java. Holthuis commented: 'As the type locality of *Bagrus hoevenii* Bleeker, 1846 is Java, and as later material identified by Bleeker as this species came from Sumatra and Borneo, it seems illogical to designate a specimen from outside these three localities as the neotype. As *B. hoevenii* is 'an economically important catfish' it should not have been difficult to obtain a specimen from Java. If this proved to be impossible I would have preferred a specimen examined and illustrated by Bleeker to be the neotype, provided that this specimen was in a sufficiently good condition'.

**Original reference**

The following is the original reference to the name placed on an Official List by the ruling given in the present Opinion:

*hoevenii*, *Bagrus*, Bleeker, 1846, *Natuur- en Geneeskundig Archief voor Néêrland's Indië*, **3**(2): 154.

# OPINION 1841

## *Scomber dentex* Bloch & Schneider, 1801 (currently *Caranx* or *Pseudocaranx dentex*) and *Caranx lugubris* Poey, [1860] (Osteichthyes, Perciformes): specific names conserved

**Keywords.** Nomenclature; taxonomy; Osteichthyes; Perciformes; CARANGIDAE; white trevally; black jack; *Caranx dentex*; *Pseudocaranx dentex*; *Caranx lugubris*.

**Ruling**

(1) Under the plenary powers the following specific names are hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:

(a) *glaucus* Linnaeus, 1758, as published in the binomen *Scomber glaucus*;

(b) *ascensionis* Cuvier in Cuvier & Valenciennes, 1833, as published in the binomen *Caranx ascensionis*.

(2) The name *Pseudocaranx* Bleeker, 1863 (gender: masculine), type species by monotypy *Scomber dentex* Bloch & Schneider, 1801, is hereby placed on the Official List of Generic Names in Zoology.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *dentex* Bloch & Schneider, 1801, as published in the binomen *Scomber dentex* (specific name of the type species of *Pseudocaranx* Bleeker, 1863);

(b) *lugubris* Poey, [1860], as published in the binomen *Caranx lugubris*;

(c) *ovatus* Linnaeus, 1758, as published in the binomen *Gasterosteus ovatus* Linnaeus, 1758.

(4) The following names are hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology:

(a) *glaucus* Linnaeus, 1758, as published in the binomen *Scomber glaucus* and as suppressed in (1)(a) above;

(b) *ascensionis* Cuvier in Cuvier & Valenciennes, 1833, as published in the binomen *Caranx ascensionis* and as suppressed in (1)(b) above;

(c) *adscensionis* Osbeck, 1771, as published in the binomen *Scomber adscensionis* (unavailable because cited as a synonym from a pre-1758 publication).

**History of Case 2898**

An application for the conservation of the specific names of *Scomber dentex* Bloch & Schneider, 1801 and *Caranx lugubris* Poey, [1860] was received from Drs William F. Smith-Vaniz (*U.S. Department of the Interior, National Biological Survey, Southeastern Biological Science Center, Gainesville, Florida, U.S.A.*) and John E. Randall (*Bernice P. Bishop Museum, Honolulu, Hawaii, U.S.A.*) on 21 June 1993. After correspondence the case was published in BZN **51**: 323–329 (December 1994). Notice of the case was sent to appropriate journals.

**Decision of the Commission**

On 1 December 1995 the members of the Commission were invited to vote on the proposals published in BZN **51**: 326–327. At the close of the voting period on 1 March 1996 the votes were as follows:

Affirmative votes — 26: Bayer, Bock, Bouchet, Cocks, Cogger, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Starobogatov, Štys, Trjapitzin

Negative votes — none.

**Original references**

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

*adscensionis*, *Scomber*, Osbeck, 1771, *A voyage to China and the East Indies*, vol. 2, p. 94.

*ascensionis*, *Caranx*, Cuvier, 1833, *in* Cuvier, G. & Valenciennes, A., *Histoire naturelle des poissons*, vol. 9, p. 102.

*dentex*, *Scomber*, Bloch & Schneider, 1801, *Systema ichthyologiae iconibus cx illustratum* ..., vol. 1, p. 30.

*glaucus*, *Scomber*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 298.

*lugubris*, *Caranx*, Poey, [1860], Poissons de Cuba. *In*: *Memorias sobre la historia natural de la Isla de Cuba, acompañadas de sumarios Latinos y extractos en Francés*, vol. 2, p. 222.

*ovatus*, *Gasterosteus*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 296.

*Pseudocaranx* Bleeker, 1863, *Natuurkundige Verhandelingen van de Hollandsche Maatschappij der Wetenschappen te Haarlem*, (2)**18**: 82.

# OPINION 1842

## *Coelurus bauri* Cope, 1887 (currently *Coelophysis bauri*; Reptilia, Saurischia): lectotype replaced by a neotype

**Keywords.** Nomenclature; taxonomy; Reptilia; Saurischia; theropod dinosaurs; *Coelophysis*; *Coelophysis bauri*.

### Ruling

(1) Under the plenary powers all previous fixations of type specimens for the nominal species *Coelurus bauri* Cope, 1887 are hereby set aside and the articulated skeleton no. AMNH 7224 in the American Museum of Natural History, New York, is designated as the neotype.

(2) The name *Coelophysis* Cope, 1889 (gender: feminine), type species by subsequent designation by Hay (1930) *Coelurus bauri* Cope, 1887, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *bauri* Cope, 1887, as published in the binomen *Coelurus bauri* and as defined by the neotype designated in (1) above specific name of the type species of *Coelophysis* Cope, 1889, is hereby placed on the Official List of Specific Names in Zoology.

(4) The name *Rioarribasaurus* Hunt & Lucas, 1991 is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology (a junior objective synonym of *Coelophysis* Cope, 1889).

(5) The name *colberti* Hunt & Lucas, 1991, as published in the binomen *Rioarribasaurus colberti*, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology (a junior objective synonym of *Coelurus bauri* Cope, 1887).

### History of Case 2840

An application to replace the lectotype of *Coelurus bauri* Cope, 1887 with a neotype was received from Dr Edwin H. Colbert (*Museum of Northern Arizona, Flagstaff, Arizona, U.S.A.*), Dr Alan J. Charig (*The Natural History Museum, London, U.K.*), Prof Peter Dodson (*School of Veterinary Medicine, University of Pennsylvania, Philadelphia, Pennsylvania, U.S.A.*), Dr David D. Gillette (*Division of State History – Antiquities, Salt Lake City, Utah, U.S.A.*), Dr John H. Ostrom (*Peabody Museum, Yale University, New Haven, Connecticut, U.S.A.*) and Dr David Weishampel (*School of Medicine, Johns Hopkins University, Baltimore, Maryland, U.S.A.*) on 9 January 1992. After correspondence the case was published in BZN **49**: 276–279 (December 1992). Notice of the case was sent to appropriate journals.

The name '*Coelurus*' in the last sentence of para. 10 of the application should read *Coelophysis* (see BZN **50**: 147, June 1993).

Comments in support were received from Dr Hans-Dieter Sues (*Royal Ontario Museum, Toronto, Ontario, Canada*), published in BZN **50**: 151 (June 1993); Dr Hilde L. Schwartz (*Los Alamos National Laboratory, Los Alamos, New Mexico, U.S.A.*), Dr R.E. Molnar (*Queensland Museum, South Brisbane, Queensland, Australia*),

Prof Zdeněk V. Špinar (*Prysk, Czech Republic*), Dr Thomas R. Holtz, Jr. (*Geological Survey, U.S. Department of the Interior, National Center, Reston, Virginia, U.S.A.*), and Prof Farish A. Jenkins, Jr. (*Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, U.S.A.*), all published in BZN **50**: 236–239 (September 1993); Dr Benjamin S. Creisler (*Seattle, Washington, U.S.A.*), Dr Nicholas Hotton III (*National Museum of Natural History, Smithsonian Institution, Washington, D.C., U.S.A.*), both published in BZN **50**: 292–294 (December 1993), together with a note of support from Dr Dale A. Russell (*Canadian Museum of Nature, Ottawa, Ontario, Canada*); Dr Elizabeth L. Nicholls (*Royal Tyrrell Museum of Palaeontology, Drumheller, Alberta, Canada*), Prof Louis L. Jacobs (*Southern Methodist University, Dallas, Texas, U.S.A.*), Dr Donald F. Glut (*Burbank, California, U.S.A.*) and Prof Armand de Ricqlès (*Université de Paris VII, Paris, France*), all published in BZN **51**: 50–51 (March 1994).

Opposing comments were received from Drs Adrian P. Hunt (*University of Colorado at Denver, Denver, Colorado, U.S.A.*) & Spencer G. Lucas (*New Mexico Museum of Natural History and Science, Albuquerque, New Mexico, U.S.A.*) and Dr Robert M. Sullivan (*The State Museum of Pennsylvania, Harrisburg, Pennsylvania, U.S.A.*), both published in BZN **50**: 147–151 (June 1993); Dr S.P. Welles (*Museum of Paleontology, University of California, Berkeley, California, U.S.A.*) and Dr George Olshevsky (*San Diego, California, U.S.A.*), both published in BZN **51**: 48–50 (March 1994); Dr Philip Huber (*Ohio University, Athens, Ohio, U.S.A.*), published in BZN **51**: 156–158 (June 1994). A reply to the comments by Drs Hunt & Lucas and Sullivan was published by Dr J. Lynett Gillette (*Ghost Ranch Conference Center, Abiquiu, New Mexico, U.S.A.*) and two authors of the application, D.D. Gillette & E.H. Colbert, in BZN **50**: 291–292 (December 1993). Further comments from Drs Lucas & Hunt and Sullivan were published in BZN **51**: 265–266 (September 1994) and **52**: 76–77 (March 1995) respectively.

It was noted on the voting paper that Cope's (1887) original *Coelophysis bauri* material, collected from Upper Triassic deposits in northern New Mexico, is fragmentary and its relationship to the better-preserved Ghost Ranch specimens is debated. Nevertheless, the names *Coelophysis* and *C. bauri* have been used since 1947 to denote the Ghost Ranch skeletons and the application by Colbert et al. sought to secure this meaning in the interest of stability. The application was put forward on the basis that the generic name *Coelophysis* appears in many works as the archetypal theropod dinosaur, and that designation of a Ghost Ranch skeleton as the neotype would define the name *Coelophysis bauri* in this sense. The Commission Secretariat has a list of 10 textbooks (by 16 authors or editors) which have used the name *Coelophysis* for the Ghost Ranch skeletons.

The case was referred to the Commission for action under the plenary powers since a neotype designation could not meet the requirements of Article 75 of the Code. The Commission was not asked to take a view on the taxonomic identity of specimens, or the stratigraphic provenance or homogeneity of the original type material of *Coelophysis bauri* and the proposed neotype, but was asked to act only in the overall interest of stability. The specimen proposed as the neotype was the holotype of the nominal taxon *Rioarribasaurus colberti* Hunt & Lucas, 1991 and approval would render the names *Rioarribasaurus* and *colberti* junior objective synonyms of *Coelophysis* Cope, 1889 and *Coelurus bauri* Cope, 1887.

**Decision of the Commission**

On 1 December 1995 the members of the Commission were invited to vote on the proposals published in BZN **49**: 278. At the close of the voting period on 1 March 1996 the votes were as follows:

Affirmative votes — 18: Bayer, Bock, Bouchet, Cocks, Corliss, Hahn, Halvorsen, Heppell, Holthuis, Kabata, Kraus, Macpherson, Mahnert, Nielsen, Nye, Ride, Starobogatov, Trjapitzin

Negative votes — 8: Cogger, Dupuis, Lehtinen, Martins de Souza, Minelli, Savage, Schuster and Štys.

Hahn commented: 'The problem in this case is a common one in palaeontology: the type material is insufficient to be useful in identifying the taxon concerned. Of the nominal genera involved, *Coelophysis* is the most important in phylogenetic discussions and the name is well used in the literature. Therefore, to conserve 'common usage' it is necessary to approve the proposals of Colbert et al.'. Heppell commented: 'It is clear that the lectotype of *Coelurus bauri* is manifestly not able to fulfil the essential function of a type specimen. In the event of any dispute as to the correct assignment of a scientific name to a taxon 'the name-bearing type provides the objective standard of reference by which the application of the name it bears is determined' (Article 61a of the Code). If the type specimen is inadequate to support this function the name it bears is inevitably a nomen dubium. If, as here, varying interpretations of its identity are current, the pragmatic solution is to set aside its type status in favour of a neotype. No suitable neotype other than the holotype of *Rioarribasaurus colberti* has been suggested in the present case and I therefore vote in support of the application, believing that it is better to clear the ground of dubious or ambiguous impedimenta and leave the way open for future taxonomic and stratigraphic assessment of this important theropod material'.

**Original references**

The following are the original references to the names placed on Official Lists and Official Indexes by the ruling given in the present Opinion:

*bauri*, *Coelurus*, Cope, 1887, *American Naturalist*, **21**: 368.

*Coelophysis* Cope, 1889, *American Naturalist*, **23**: 626.

*colberti*, *Rioarribasaurus*, Hunt & Lucas, 1991, *Palaeontologische Zeitschrift*, **65**: 191.

*Rioarribasaurus* Hunt & Lucas, 1991, *Palaeontologische Zeitschrift*, **65**: 191.

The following is the reference for the designation of *Coelurus bauri* Cope, 1887 as the type species of the nominal genus *Coelophysis* Cope, 1889:

**Hay, O.P.** 1930. *Second bibliography and catalogue of the fossil Vertebrata of North America*, vol. 2, p. 186.

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BULLETIN OF ZOOLOGICAL NOMENCLATURE

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## Notices

(a) *Invitation to comment.* The Commission is authorised to vote on applications published in the *Bulletin of Zoological Nomenclature* six months after their publication but this period is normally extended to enable comments to be submitted. Any zoologist who wishes to comment on any of the applications is invited to send his contribution to the Executive Secretary of the Commission as quickly as possible.

(b) *Invitation to contribute general articles.* At present the *Bulletin* comprises mainly applications concerning names of particular animals or groups of animals, resulting comments and the Commission's eventual rulings (Opinions). Proposed amendments to the Code are also published for discussion.

Articles or notes of a more general nature are actively welcomed provided that they raise nomenclatural issues, although they may well deal with taxonomic matters for illustrative purposes. It should be the aim of such contributions to interest an audience wider than some small group of specialists.

(c) *Receipt of new applications.* The following new applications have been received since going to press for volume 53, part 2 (published on 28 June 1996). Under Article 80 of the Code, existing usage is to be maintained until the ruling of the Commission is published.

(1) *Cervus gouazoubira* Fischer, 1814 (currently *Mazama gouazoubira*; Mammalia, Artiodactyla): proposed conservation as the correct original spelling of the specific name. (Case 3018). A.L. Gardner.

(2) *Octopus areolatus* de Haan *in* d'Orbigny, [1841] (Mollusca, Cephalopoda): proposed suppression of the specific name. (Case 3019). I.G. Gleadall.

(3) *Megalotragus* van Hoepen, 1932 (Mammalia, Artiodactyla): proposed conservation; *Alcelaphus kattwinkeli* Schwarz, 1932 (currently *Megalotragus kattwinkeli*): proposed conservation of the specific name, and proposed confirmation of the rediscovered holotype as the name-bearing type. (Case 3020). A.W. Gentry & Anthea Gentry.

(d) *Ruling of the Commission.* Each Opinion published in the *Bulletin* constitutes an official ruling of the International Commission on Zoological Nomenclature, by virtue of the votes recorded, and comes into force on the day of publication of the *Bulletin*.

## Fourth Edition of the International Code of Zoological Nomenclature

Starting in mid-May 1995, more than 700 copies of the Discussion Draft of the proposed Fourth Edition of the Code were distributed to zoologists in more than

40 countries. Over 500 comments were received, and during the following year all of them were considered by the seven members of the Editorial Committee; a number of the comments were published in the *Bulletin* (**52**: 228–233, 294–302; **53**: 6–17, 80–88). The comments varied widely in their scope, and while some represented the opinions of one person others were the collective views of members of an institution or society drawn up after a formal meeting to consider the Discussion Draft. The Commission wishes to thank all those who made comments on the Discussion Draft, and also those whose earlier suggestions had been of much assistance.

The seven members of the Editorial Committee met in Vicenza (Italy) from 24–30 June 1996 and reviewed the Articles of the Code in the light of all the comments which had been made on the Discussion Draft. The Committee prepared an amended draft of the Code, and in July submitted this and an explanatory report to the members of the Commission prior to its meeting in conjunction with the International Congress of Systematic and Evolutionary Biology (ICSEB) in Budapest in August. After consideration by the Commission, in the course of which some changes were made, the amended draft was discussed at a Congress workshop on 19 August; this workshop constituted a meeting of the Section of Zoological Nomenclature of the International Union of Biological Sciences (IUBS) and was attended by about 45 persons. The meeting agreed that after further amendment the draft should be submitted to the full Commission for approval and to IUBS for formal ratification. Further information about the Fourth Edition of the Code will be made known as soon as possible. At present it is planned to publish the edition in 1997 and for its provisions to come into effect on 1 January 1999.

## Towards Stability in the Names of Animals

The International Commission on Zoological Nomenclature was founded on 18 September 1895. In recognition of its Centenary a history of the development of nomenclature since the 18th century and of the Commission has been published entitled '*Towards Stability in the Names of Animals — a History of the International Commission on Zoological Nomenclature 1895–1995*' (ISBN 0 85301 005 6). It is 104 pages (250 × 174 mm) with 18 full-page illustrations, 14 being of eminent zoologists who played a crucial part in the evolution of the system of animal nomenclature as universally accepted today. The book contains a list of all the Commissioners from 1895 to the present. The main text was written by R.V. Melville (former Secretary of the Commission) and has been completed and updated following his death.

Copies may be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. *or* A.A.Z.N., Attn. Dr Al Norrbom, c/o USDA Systematic Entomology Laboratory, MRC-168, National Museum of Natural History, Washington D.C. 20560, U.S.A.

The cost is £30 or $50 (including surface postage); members of the American and European Associations for Zoological Nomenclature are offered the reduced price of £20 or $35. Payment should accompany orders.

## Official Lists and Indexes of Names and Works in Zoology — Second Supplement to 1990

*The Official Lists and Indexes of Names and Works in Zoology* was published in 1987. This book gives details of all the names and works on which the Commission has ruled since it was set up in 1895, up to 1985; there are about 9,900 entries.

Copies can be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. *or* A.A.Z.N., Attn. Dr Al Norrbom, c/o USDA Systematic Entomology Laboratory, MRC-168, National Museum of Natural History, Washington D.C. 20560, U.S.A. The cost is £60 or $110, but members of the American Association for Zoological Nomenclature or the European Association for Zoological Nomenclature are offered the reduced price of £40 or $75; payment should accompany orders.

In the five years 1986–1990, 946 names and five works were added to the Official Lists and Official Indexes. A supplement has been prepared giving these additional entries, together with some amendments and updatings to entries in the 1987 volume. Copies can be obtained without charge from either of the above addresses.

## The International Code of Zoological Nomenclature

The Third Edition (published 1985) supersedes all earlier versions and incorporates many changes.

Copies can be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. *or* A.A.Z.N., Attn. Dr Al Norrbom, c/o USDA Systematic Entomology Laboratory, MRC-168, National Museum of Natural History, Washington D.C. 20560, U.S.A. The cost is £19 or $35, but members of the American Association for Zoological Nomenclature or the European Association for Zoological Nomenclature are offered the reduced price of £15 or $29; payment should accompany orders.

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## Draft *BioCode*: prospective international rules for the scientific names of organisms

As reported in BZN **51**: 188–216 and elsewhere, an exploratory meeting was held in March 1994 at Egham (U.K.) under the auspices of the International Unions of Biological Sciences and of Microbiological Societies (IUBS and IUMS) to consider the harmonization of the several existing Codes of taxonomic nomenclature, especially with regard to terminology, and the possibility of a unified Code for future names of all biological organisms.

A further meeting was convened at Egham in May 1995 by the President of IUBS (Prof D.L. Hawksworth), and a preliminary draft of a unified '*BioCode*' was circulated to members of the International Commission on Zoological Nomenclature and the corresponding bodies concerned with botanical, microbiological and viral nomenclature. A third meeting was held in March 1996, and prepared a revised draft *BioCode* for discussion at a symposium to be held at the International Congress of Systematic and Evolutionary Biology (ICSEB) in Budapest in August 1996; this symposium had not yet taken place when the present issue of the *Bulletin* went to press.

The draft *BioCode* for discussion in Budapest was published in *Taxon* (**45**: 349–372; May 1996) and is reproduced below (with the omission of some provisions relating to cultivated plants). Although much of the terminology in it is different from that of the zoological Code, the same is true for botany and microbiology. The changes in content are perhaps more fundamental for botanists than for zoologists (e.g. the incorporation of the principle of coordinate status of names within the family-, genus- and species-groups — perhaps the main difference between the existing Codes). The *BioCode* is much shorter than the existing Codes because it is formulated to regulate only names established in the future (the date 1 January 2000 appears prominently in it, but this is only a notional date and not intended as a realistic starting point).

At the time of going to press (early August 1996) the International Commission on Zoological Nomenclature had not discussed the principles or feasibility of a unified *BioCode*, but successive Presidents have taken the view that, at the present stage at least, the Commission should cooperate with this IUBS-IUMS project. To this end the then President of the Commission was present at the first two of the meetings mentioned above, and the Executive Secretary attended all three. It is emphasised that the *BioCode* project is in parallel with, and in no way replaces, the preparation of a Fourth Edition of the *International Code of Zoological Nomenclature*; the latter Code will continue to apply to animal names established before the starting point of any *BioCode* which may be adopted in the future.

Further reports on the status of the IUBS-IUMS *BioCode* initiative will be published in the *Bulletin*.

*Draft prepared and edited by*
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*Third draft, revised at a meeting of the Committee at Egham, U.K., 8–10 March 1996, by*
W. Greuter, D.L. Hawksworth, J. McNeill, M.A. Mayo, B.J. Tindall, R.P. Trehane & P.K. Tubbs

*Introduction*

The typographical layout of the present Draft follows that of the *International Code of Botanical Nomenclature* (1994), abbreviated ICBN hereafter, and therefore differs from that of the current editions of the *International Code of Zoological Nomenclature* (ICZN) and of the *International Code of Nomenclature of Bacteria* (BC).

The Draft does not include Recommendations, Notes, Examples or a Glossary. For further relevant explanations, it may be useful to refer to the 'Introductory comments' by Greuter & Nicolson (1996, *Taxon*, **45**: 343–348), a document initially prepared for the benefit of members of the General Committee on Botanical Nomenclature.

To help those who wish to compare the proposed new rules with the corresponding entries in the current Codes (BC, ICBN, ICZN), cross-references are provided at the end of each paragraph, preceded by a dash. The following, largely self-explanatory abbreviations have been used: App. = Appendix; Art. = Article; G.C. = General Consideration; Pre. = Preamble; Prin. = Principle; Rec. = Recommendation.

Equivalences between technical terms used in this Draft and those that appear in the current Codes of biological nomenclature: BC, ICBN, ICZN, and the *International Code of Nomenclature for Cultivated Plants* (ICNCP), are given in Table 1.

**PREAMBLE**

1. Biology requires a precise, coherent and simple system for the naming of organisms used internationally, dealing both with the terms which denote the ranks of taxonomic groups and with the scientific names which are applied to the individual taxonomic groups of organisms (taxa). — BC, G.C. 1 & 2; ICBN, Pre. 1; ICZN, Pre. [2] & [4], Art. 1.

2. The provisions of this Code shall apply to names of all kinds of non-viral organisms, whether fossil or non-fossil, and of some fossil traces of organisms, that

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Table 1. Equivalence of nomenclatural terms used in the Draft *BioCode* and in the current biological *Codes* (as enumerated in the text). The concepts covered by terms given as equivalent are not always exactly the same.

| BioCode | BC | ICBN | ICNCP | ICZN |
|---|---|---|---|---|
| *Publication and date of names* | | | | |
| published | effectively published | effectively published | published | published |
| date | date | date (or priority) | date | priority |
| precedence | priority | priority | precedence | precedence |
| earlier | senior | earlier | earlier | senior |
| later | junior | later | later | junior |
| *Nomenclatural status* | | | | |
| established | validly published | validly published | established | available |
| registration | validation | registration | registration | — |
| acceptable | legitimate | legitimate | — | potentially valid |
| *Taxonomic status* | | | | |
| accepted | correct | correct | accepted | valid |
| *Types and names* | | | | |
| name-bearing type | nomenclatural type | nomenclatural type | standard | name-bearing type |
| nominal taxon | name and type | name and type | — | nominal taxon |
| *Synonymy* | | | | |
| homotypic | objective | nomenclatural | — | objective |
| heterotypic | subjective | taxonomic | — | subjective |
| replacement name | – | avowed substitute | | replacement name |
| *Setting aside the rules* | | | | |
| conservation | conservation | conservation | — | conservation |
| suppression | rejection | explicit rejection | | suppression |

are published and established on or after 1 January 2000, and shall govern the choice of name when these names compete among themselves or with earlier names. They shall also, and without limitation of date, provide, in the interest of nomenclatural stability and security, for the protection, conservation, or suppression of all such names, as well as for their correct form and spelling. — ICBN, Pre. 7; ICZN, Pre.

3. Names of non-viral organisms that have been established (i.e., were validly published or became available) prior to 1 January 2000 and are not yet covered by adopted Lists of Protected Names are in all other respects (including their subsequent typification) governed by the *International Code of Nomenclature of Bacteria*, the *International Code of Botanical Nomenclature*, or the *International Code of Zoological Nomenclature*, depending on the accepted taxonomic position of their type.

4. Special provisions apply to the nomenclature of particular groups of organisms, notably viruses and cultivated plants.

5. Separate rules for virus nomenclature, contained in the *International Code of Virus Classification and Nomenclature*, have been established in conformity with Principles I & V of this Code and with the thrust of many of its rules. Because names of virus species do not have the binominal form required under this Code, and names of virus taxa in other recognized ranks have mandatory terminations, provisions of this Code proscribing these terminations for non-virus taxa ensure that the names of viruses and other organisms cannot conflict.

6. The nomenclature of cultivated plants follows the provisions of this Code, in so far as these provisions are applicable, but the naming of distinguishable groups of plants whose origin or selection is primarily due to the intentional actions of mankind follow the supplementary provisions of the *International Code of Nomenclature for Cultivated Plants*.

## DIVISION I. PRINCIPLES

### Principle I

The *BioCode* governs the formation and choice of scientific names of known taxa but not the definition of the taxa themselves. Nothing in this Code may be construed to restrict the freedom of taxonomic thought or action. — BC, G.C. 4; ICZN, Pre. [2].

### Principle II

Scientific nomenclature of organisms builds upon the Linnaean system of binary names for species. — BC, Rule 12A; ICBN, Art. 23; ICZN, Art. 5.

### Principle III

The application of names of taxa is determined by means of name-bearing types, although application of this principle is not universal at suprafamilial ranks. — BC, Prin. 5; ICBN, Prin. II; ICZN, Art. 61.

### Principle IV

The nomenclature of a taxon is based upon precedence of publication, although application of this principle is not mandatory at all ranks. — BC, Prin. 6; ICBN, Prin. III; ICZN, Pre. [3].

### Principle V

Each taxon in the family-group, genus-group or species-group with a particular circumscription, position, and rank has only one accepted name, except as may be specified in earlier Codes. — BC, Prin. 8; ICBN, Prin. IV; ICZN, Pre. [2].

### Principle VI

Scientific names of taxa are by convention treated as if they were Latin, regardless of their derivation. — BC, Prin. 3 & Rule 6; ICBN, Prin. V; ICZN, Art. 11.

### Principle VII

The only proper reasons for changing a name are either a change in the circumscription, position or rank of the taxon, resulting from adequate taxonomic study, or the promotion of nomenclatural stability. — BC, Prin. 9; ICBN, Pre. 9; ICZN, Art. 23b.

### Principle VIII

In the absence of a relevant rule or where the consequences of rules are doubtful, established custom is followed. — BC, Rule 4; ICBN, Pre. 10; ICZN, Art. 80.

### Principle IX

The rules of nomenclature are retroactive unless expressly limited (but see Pre. 2–3). — BC, Rule 2; ICBN, Prin. VI; ICZN, Art. 86.

## DIVISION II. RULES

## CHAPTER I. TAXA AND RANKS

### Article 1

1.1. Taxonomic groups of any rank will, in this Code, be referred to as taxa (singular: taxon). — BC, G.C. 7; ICBN, Art. 1.1; ICZN, Art. 1.

### Article 2

2.1. Every individual organism is treated as belonging to an indefinite number of taxa of consecutively subordinate rank, among which genus and species are essential. – ICBN, Art. 2.1.

### Article 3

3.1. The principal ranks of taxa in descending sequence are: kingdom, phylum, class, order, family, genus, and species. — BC, Rule 5b; ICBN, Art. 3.1.

3.2. Taxa that do not consist of whole organisms but only of particular parts of organisms, or part of their life history, or their fossil traces, may receive names under special regulations [to be determined] at only some of these ranks, e.g. fossil organ-genera, the anamorphs of pleomorphic fungi, or ichnotaxa (see Art. 36). Names of such form taxa do not compete for precedence with names applying to the whole organisms and to all stages of their life history. — ICBN, Art. 3.3–4; ICZN, Art. 1d, 10d, 23g & 42b(i).

### Article 4

4.1. Secondary ranks of taxa, when required, include in descending sequence: domain above kingdom, superfamily above family, subfamily and tribe between family and genus, subgenus, section and series between genus and species, and subspecies, variety and form below species. — BC, Rule 5b; ICBN, Art. 4.1.

4.2. If an even greater number of ranks of taxa is desired, the terms for these are made by adding either of the prefixes super- or sub- to non-prefixed terms denoting principal or secondary ranks. — ICBN, Art. 4.2.

4.3. Throughout this Code the phrase 'subdivision of a family' refers only to taxa of a rank between family and genus; 'subdivision of a genus' refers only to taxa of a rank between genus and species; 'family-group' refers to the ranks from superfamily to subtribe, 'genus-group' refers to the ranks of genus and subgenus, and 'species-group' to the ranks of species and subspecies. — ICBN, Art. 4 Note 1.

4.4. Further ranks may be intercalated or added, but designations of taxa in such ranks are not governed by this Code. — ICBN, Art. 4.3.

## CHAPTER II. PUBLICATION

### Article 5

5.1. Publication, under this Code, is defined as distribution of text or images (but not sound) in several identical, durable and unalterable copies, in a way that makes it generally accessible, as a permanent public record, to the scientific community, be it through sale or exchange or gift, and subject to the restrictions and qualifications in the present Article. BC, Rule 25a; ICBN, Art. 29.1; ICZN, Art. 8 & 9.

5.2. Normally, publication is by distribution of printed matter. Other non-amendable and generally readable media such as microcards, microfiches, and non-erasable laser disks are also acceptable vectors of published information. — Contrary to BC, Rule 25b (3); ICZN, Art. 8a.

5.3. Any matter containing a disclaimer to the effect that it is not intended for general public use is not considered as a publication. — ICZN, Art. 8b.

5.4. Communication of text or images at a public meeting, in any way unlikely to be durable and reach a wider audience than those in attendance, is not publication. — BC, Rule 25b (1); ICZN, Art. 9.

5.5. The placing of texts or images in collections or exhibits, e.g. on labels (including specimen labels, even if printed) or information sheets, is not publication. — BC, Rule 25b (2); ICZN, Art. 9.

5.6. The reproduction of hand-written material in facsimile, e.g. by print, photostat or microfilm, is not publication. — ICZN, Art. 9.

5.7. Inclusion of names in issued patents and patent applications is not publication. — BC, Rule 25b (5).

5.8. The distribution of films or photographs of text or images is not publication. — ICZN, Art. 9.

5.9. The dissemination of text or images on erasable electronic support, or through electronic communication networks, is not publication. — ICZN, Art. 9.

**Article 6**

6.1. The publication date is the date on which publication as defined in Art. 5 took place. In the absence of proof establishing some other date, the one appearing in the publication itself must be accepted. — BC, Rule 26a; ICBN, Art. 31.1; ICZN, Art. 21.

6.2. When separates from periodicals or other works are issued in advance, the date of the separate is the publication date. — ICBN, Art. 31.2; ICZN, Art. 21h.

## CHAPTER III. NAMES (GENERAL PROVISIONS)

### SECTION 1. STATUS

**Article 7**

7.1. For the purposes of this Code, publication of a name is defined in Art. 5–6. — ICBN, Art. 6.1; ICZN, Art. 7–9.

7.2. Established names are those that are published in accordance with Art. 8–13 (see also Art. 38). — ICBN, Art. 6.2; ICZN, Art. 10–11.

7.3. Acceptable names are those that are in accordance with the rules, i.e., are not unacceptable under Art. 18. — ICBN, Art. 6.3.

7.4. The accepted name of a taxon with a particular circumscription, position, and rank is the acceptable name which must be adopted for it under the rules (see Art. 19). — ICBN, Art. 6.5; ICZN, Art. 23.

7.5. In this Code, unless otherwise indicated, the word 'name' means an established name, whether it be acceptable or unacceptable (see Art. 20). — ICBN, Art. 6.6; ICZN, Art. 23.

7.6. The name of a taxon consisting of the name of a genus combined with one epithet is termed a binomen, the name of a species combined with an infraspecific epithet is termed a trinomen; binomina or trinomina are also termed combinations. — ICBN, Art. 6.7; ICZN, Art. 5.

### SECTION 2. ESTABLISHMENT

**Article 8**

8.1. In order to be established on or after 1 January 2000, a name of a taxon must: (a) be published as provided for by Art. 5–6; (b) have a form that complies with the provisions of Art.

25–33; (c) be adopted by the author(s), who must be a named person (or persons); (d) not be proposed merely in anticipation of the future acceptance of the group concerned, or of a particular circumscription, position, or rank of the group; and (e) comply with the special provisions of Art. 9–12 (see also Art. 38.3). Furthermore, it must be registered as provided for in Art. 13. — BC, Rule 29 & 30; ICBN, Art. 32.1.

8.2. In order to be established, a name of a new taxon must be accompanied by a Latin or English description or diagnosis, or by full and direct reference to a previously published Latin or English description or diagnosis that applies to the taxon when placed in a rank belonging to the same rank group as defined in Art. 9.3. — BC, see Rec. 25a; ICBN, Art. 36.1.

8.3. In order to be established, new names must be clearly identified as such in the original publication, by statements such as 'new species', 'sp. nov.', 'new combination', 'comb. nov.', etc. — BC, Rule 33a.

8.4. When a publication contains a disclaimer to the effect that names or nomenclatural acts in it are not to be considered for nomenclatural purposes, names that it may contain are considered as not published. — BC, see Rule 28b; ICZN, Art. 8b.

8.5. When two or more different names are proposed simultaneously for the same taxon by the same author(s) as alternative names, neither is considered to be adopted by its author(s) (Art. 8.1 (c)).

### Article 9

9.1. A new combination or a replacement name for a previously established name may not be established unless its basionym (name-bringing or epithet-bringing synonym) or the replaced name is clearly indicated with a direct and unambiguous reference given to its author and place of original publication. — ICBN, Art. 33.2; ICZN, Art. 67h.

9.2. In order for a reference to be direct and unambiguous it must include page or plate reference (where applicable) and date; for publications with a consecutive pagination, page reference is a reference to the page or pages on which the basionym was published or on which the protologue is printed, but not to the pagination of the whole publication unless it is coextensive with that of the protologue. — ICBN, Art. 33 Note 1.

9.3. The basionym or replaced name may be of a different rank than the new combination or replacement name, but only within the following rank groups: ranks above superfamily, family-group ranks, genus-group ranks, ranks between genus-group and species-group, species-group ranks, and ranks below subspecies. — ICBN, Art. 41.1.

### Article 10

10.1. The name of a new taxon of the rank of genus or below may not be established unless the name-bearing type is designated (see Art. 14–17). Designation of the type must include one of the words 'holotype' (holotypus) or 'type' (typus) or its abbreviation. — BC, Rule 27, see also Rule 18b; ICBN, Art. 37.1; ICZN, Art. 13b.

10.2. For the name of a new species or infraspecific taxon for which the holotype is a preserved specimen, the institution or collection in which the type is conserved must be specified. — BC, Rec. 30a; ICBN, Art. 37.5.

### Article 11

11.1. In order to be established, a name of a new taxon of fossil plants and non-fossil algae of specific or lower rank must be accompanied by an illustration or figure showing the essential characters, in addition to the description or diagnosis, or by a reference to an illustration or figure previously published in accordance with Art. 5–6. — ICBN, Art. 38.1.

### Article 12

12.1. Only if the corresponding genus or species name is established can the name of a subordinate taxon be established. — BC, Rule 32b; ICBN, Art. 43.1.

## SECTION 3. REGISTRATION

### Article 13

13.1. Registration is effected (a) by submitting the published matter that includes the protologue(s) to a registering office designated by the relevant international body (see Div. III.7), or (b), where an official medium for establishment of names has been designated, by publication in that medium. Registration will be granted to all submitted names that fulfil the requirements of Art. 8–12.

13.2. The date of a name under Art. 13.1 (a) is that of its registration, which is the date of receipt of the relevant matter at the registering office. Under Art. 13.1 (b) it is the date of publication of the official medium. — BC, Rule 24a, 24b & 27; ICBN, Art. 45.1.

13.3. When one or more of the other conditions for establishment have not been met prior to registration, the name must be resubmitted for registration after these conditions have been met. — ICBN, Art. 45.2.

## SECTION 4. TYPIFICATION

### Article 14

14.1. The application of names of taxa of the rank of superfamily or below, and of those names of taxa in the higher ranks that are ultimately based on generic names, is determined by means of name-bearing types. The unit formed by the name and the type is referred to as the nominal taxon. — BC, Rule 18a; ICBN, Art. 7.1; ICZN, Art. 61a.

14.2. A name-bearing type is that element to which the name of a taxon is permanently attached, whether it be an accepted name or not. — BC, Rule 15; ICBN, Art. 7.2; ICZN, Art. 61a.

14.3. A new name based on a previously published acceptable name, e.g. as a new combination or as a replacement for an older name, is typified by the type of the older name (see Art. 9). — BC, Rule 34a; ICBN, Art. 7.3; ICZN, Art. 67h, 72e.

### Article 15

15.1. For names of superspecies, species or infraspecific taxa the name-bearing type is a specimen (but see Art. 15.3). A specimen as here defined normally consists of a single individual or parts thereof, but may sometimes consist of (parts of) more than one individual, on the condition that they are all of the same taxon, collected or isolated at the same time and place, and conserved permanently as a single curatorial unit (e.g., herbarium sheet or preparation). — BC, Rule 18a; ICBN, Art. 8.1; ICZN, Art. 61a.

15.2. Type specimens cannot be metabolically active organisms, but may be organisms permanently preserved in a viable but metabolically inactive state, e.g. by lyophilization or cryopreservation. — BC, Rule 18a; ICBN, Art. 8.2.

15.3. When authors of new names explicitly indicate in the protologue that it is not practicable to preserve a specimen, the type may be an illustration. — BC, Rule 18a, see also Rule 18f; ICBN, Art. 8.3; ICZN, Art. 73 (a)(iv).

### Article 16

16.1. If a type specimen is lost or destroyed, or is unavailable for consultation for an indefinite period of time, a neotype may be designated. A neotype must be selected from among duplicate material of the original type, when such material exists and does not demonstrably differ taxonomically from the original type. — BC, Rule 18c, 18d, 18e & 18g; ICBN, Art. 9.6; ICZN, Art. 75.

16.2. When a type specimen contains parts belonging to more than one taxon, a part of it may be designated as lectotype so as to fix the application of the name. — ICBN, Art. 9.10; ICZN, Art. 74.

16.3. When a type is demonstrably ambiguous and cannot be critically identified for purposes of the precise application of the name of a taxon, and it is desirable to fix that application, an epitype may be designated that is not itself ambiguous. — ICBN, Art. 9.7; ICZN, Rec. 75E.

### Article 17

17.1. The type of a nominal taxon in the rank of genus or subdivision of a genus is a nominal species (see also Art. 22.9). — BC, Rule 20a–g; ICBN, Art. 10.1; ICZN, Art. 63.

17.2. The type of a nominal taxon of the family-group, or of a nominal taxon of higher rank whose name is ultimately based on a generic name, is the nominal genus from which it is derived. — BC, Rule 21a & 21b; ICBN, Art. 10.6; ICZN, Art. 63.

## SECTION 5. HOMONYMY

### Article 18

18.1. A family-group, genus-group or species-group name established on or after 1 January 2000, unless conserved (Art. 22) or otherwise protected, is unacceptable if it is a later homonym (see also Art. 18.4), that is, if it, or one of its coordinate names, is spelled exactly like a name based on a different type that was previously established for a taxon of the same rank-group. — BC, Rule 51b(4); ICBN, Art. 53.1; ICZN, Art. 52.

18.2. When two or more specific or infraspecific names based on different types are so similar that they are likely to be confused they are treated as homonyms. The same applies in the case of confusingly similar generic botanical names. — BC, Rule 51b(4), 62a; ICBN, Art. 53.3; ICZN, Art. 58.

18.3. When it is doubtful whether names are sufficiently alike to be confused, a request for a decision may be submitted to the appropriate committee(s). A recommendation will then be put forward and, if ratified, will become a binding decision. — BC, Rule 58; ICBN, Art. 53.4.

18.4. When two or more homonyms have the same date, the first of them that is adopted in publication (Art. 5–6) by an author who simultaneously rejects the other(s) is the only one acceptable. Likewise, if an author, in publication, substitutes other names for all but one of these homonyms, the homonym for the taxon that is not renamed takes precedence. — ICBN, Art. 53.6; ICZN, Art. 24.

## SECTION 6. PRECEDENCE

### Article 19

19.1. For purposes of precedence the date of a name is either the date attributed to it in an adopted List of Protected Names or, for unlisted names, the date on which it was validly published under the botanical or bacteriological Code, or became available under the zoological Code, or was established under the present Code. Limitations of precedence that under previous Codes affected names in certain groups or of certain categories, even if not provided for in the present Code, still apply to such names if they were published before 1 January 2000. — BC, Rule 24a & 24b; ICZN, Art. 10.

19.2. In no case does a name have precedence outside the rank in which it is published. The automatic establishment of coordinate names in the same rank-group (Art. 27.1, 29.1 and 31.5) is not however affected by the present provision. — BC, Rule 23a; ICBN, Art. 11.2; ICZN, Art. 23c.

19.3. For any taxon from superfamily to genus inclusive, the accepted name is the earliest acceptable one with the same rank, except in cases of limitation of precedence by conservation or protection (see Art. 21 22) or where Art. 19.7, 23, 24, or 36 apply. BC, Rule 23a; ICBN, Art. 11.3; ICZN, Art. 23.

19.4. For any subgenus or species-group taxon, the accepted name is the combination of the final epithet of the earliest acceptable name of the taxon in the same rank, with the accepted name of the genus or species to which it is assigned, except (a) in cases of limitation of precedence under Art. 21 24, or (b) if the resulting combination cannot become established under Art. 8.1(b) or is unacceptable under Art. 18, or (c) if Art. 19.7 or 36 rule that a different combination be used. — BC, Rule 23a; ICBN, Art. 11.4; ICZN, Art. 23.

19.5. When, for any taxon of the family-group, genus-group or species-group, a choice is possible between acceptable names of equal date, or between final epithets of acceptable names of equal date, the first such choice to be published (Art. 5 6) establishes the relative precedence of the chosen name, and of any acceptable combination with the same type and final epithet at that rank, over the other competing name(s) (but see Art. 19.6). – BC, Rule 24b; ICBN, Art. 11.5; ICZN, Art. 24.

19.6. A choice as provided for in Art. 19.5 is effected by adopting one of the competing names, or its final epithet in the required combination, and simultaneously rejecting or relegating to synonymy the other(s), or homotypic synonyms thereof. — ICBN, Art. 11 Note 1; ICZN, Art. 24.

19.7. Names of organisms (animals and algae excepted) based on a non-fossil type are treated as having precedence over names of the same rank based on a fossil (or subfossil) type. — ICBN, Art. 11.7.

19.8. The principle of precedence is not mandatory for names of taxa not belonging to the family-group, the genus-group or the species-group. — BC, Rule 23a (up to class); ICBN, Art. 11.9; ICZN, Art. 1b.

**Article 20**

20.1. Unless it has been established (Art. 7.2), a name of a taxon has no status under this Code. — BC, Prin. 7; ICBN, Art. 12.1.

**Article 21**

21.1. In order to stabilize the nomenclatural status of names in current use, and to prevent their being displaced by names no longer in use, published lists of names may be submitted to the appropriate committee for adoption.

21.2. Once a list has been adopted, all listed names and their coordinate names are protected, subject to specified restrictions and exceptions. A protected name is treated as if conserved against earlier homonyms and unlisted competing synonyms; it is accepted as established in the place and on the date cited in the list; and its type, when listed, its spelling and, if specified, its gender are treated as if conserved.

21.3. Protection can, for individual lists, be restricted with respect to the options set out in Art. 21.2, and individual entries on a list can be exempted from protection. Such restrictions and exceptions are to be specified upon adoption by the appropriate committee.

21.4. Once a list has been adopted, entries can be added to, modified in or removed from that list only by the mechanisms of conservation or suppression of names (Art. 22–23). Specified restrictions and exceptions can be waived or modified only upon recommendation of the appropriate committee.

21.5. An earlier homonym of a protected name does not lose its status of an established name, but the precedence of the two homonyms is inverted by protection. — ICBN, Art. 15.2.

21.6. When, for a taxon from superfamily to genus inclusive, two or more protected names compete, Art. 19.3 governs the choice of the correct name (see also Art. 21.9). — ICBN, Art. 15.3.

21.7. When, for a taxon below the rank of genus, two or more protected names and/or two or more names with the same final epithet and type as a protected name compete, Art. 19.4 governs the choice of the correct name. — ICBN, Art. 15.4.

21.8. The date of protection does not affect the date (Art. 19) of a protected name, which is determined only on the basis of its establishment or equivalent actions under previous Codes. — BC, Rule 24b; ICBN, Art. 15 Note 1.

21.9. A name which is neither protected nor has the same type and final epithet as a protected name in the same rank may not be applied to a taxon which includes the type of a protected name in that rank unless the final epithet of the latter cannot be used in the required combination (see Art. 19.4(b)). — ICBN, Art. 15.5.

21.10. Conservation (Art. 20) and suppression (Art. 23.1) override protection. — ICBN, Art. 15.6.

**Article 22**

22.1. Conservation of names, enacted by decisions of appropriately mandated committees, is a means of suspending the application of the rules in the interest of stability of nomenclature of individual names of taxa of the family-group, genus-group and species-group, or, where adopted lists of protected names exist, of amending such lists. ICBN, Art. 14.1; ICZN, Art. 79c.

22.2. Once conserved, a name is placed on an appropriate list. It is then treated as established in the place and on the date cited in that list. — ICZN, Art. 78f.

22.3. A conserved name is conserved against all other names in the same rank-group based on the same type (homotypic synonyms, which are to be rejected), whether explicitly cited as rejected or not, and against those names based on different types (heterotypic synonyms) that are explicitly cited. A conserved binomen or trinomen is conserved against all names listed as rejected, and against all combinations based on the rejected names. BC, Rule 23a, 56b; ICBN, Art. 14.4.

22.4. When a conserved name competes with one or more names based on different types and against which it is not explicitly conserved, the earliest of the competing names is adopted in accordance with Art. 19, unless Art. 21 applies. — BC, Rule 56b; ICBN, Art. 14.5; ICZN, Art. 78f.

22.5. When a name of a taxon has been conserved against an earlier name based on a different type, the latter is to be restored, subject to Art. 19, if it is considered the name of a taxon at the same rank distinct from that of the conserved name, except when the earlier rejected name is a homonym of the conserved name or when Art. 21 applies. — ICBN, Art. 14.6.

22.6. A rejected name, or a combination based on a rejected name, may not be restored for a taxon which includes the type of the corresponding conserved name. ICBN, Art. 14.7.

22.7. The stated type of a conserved name may not be changed except by the procedure outlined in Art. 22.14. — BC, Rule 36, 37a; ICBN, Art. 14.8; ICZN, Art. 79c.

22.8. A name may be conserved with a different type from that designated by the author or determined by application of the Code (see also Art. 22.9). Such a name may be conserved either from its place of establishment (even though the type may not then have been included in the named taxon) or from a later publication by an author who did include the type as conserved. In the latter case the original name and the name as conserved are treated as if they were homonyms (Art. 18), whether or not the name as conserved was accompanied by a description or diagnosis of the taxon named. — ICBN, Art. 14.9.

22.9. In exceptional cases, the type of a conserved botanical genus-group name may be a specimen or illustration. — ICBN, Art. 10.4.

22.10. A conserved name, with its corresponding autonyms and coordinate names, if any, is conserved against all earlier homonyms. An earlier homonym of a conserved name does not

lose its status of an established name, but the precedence of the two homonyms is inverted by conservation. — BC, Rule 56b; ICBN, Art. 14.10.

22.11. A name may be conserved in order to preserve a particular orthography or gender. A name so conserved is to be attributed without change of date to the author who established it, not to an author who later introduced the conserved spelling or gender. - ICBN, Art. 14.11; ICZN, Art. 79c.

22.12. The date of conservation does not affect the date (Art. 18) of a conserved name, which is determined only on the basis of the date of its establishment (Art. 8 13). — ICBN, Art. 14 Note 3.

22.13. The lists of conserved names will remain permanently open for additions and changes. Regulations and procedures for the conservation of names in the major groups of organisms are outlined in an Annex to be provided.

22.14. Any proposal of an additional name, or for the amendment of an existing entry, must be accompanied by a detailed statement of the cases both for and against its conservation. Such proposals must be submitted to the appropriate committee. BC, App. 8; ICBN, Art. 14.12; ICZN, Art. 79c.

22.15. When a proposal for the conservation of a name has been referred to the appropriate committee for study, retention of that name is authorized pending the committee's recommendation and its ratification. — ICBN, Art. 14.14; ICZN, Art. 80.

### Article 23

23.1. Any name that would cause a disadvantageous nomenclatural change may be proposed for suppression. A name thus suppressed, or its basionym if it has one, is placed on a list. Along with the listed names, all combinations based on them, and all suprageneric names that may be formed from them, are similarly suppressed, and none is to be used. ICBN, Art. 56.1; ICZN, Art. 78h.

23.2. The list of suppressed names will remain permanently open for additions and changes. Any proposal for suppression of a name must be accompanied by a detailed statement of the cases both for and against its suppression, including considerations of typification. Such proposals must be submitted to the appropriate committee. That committee's recommendation, once ratified, must be followed. — BC, Rule 56a; ICBN, Art. 56.2; ICZN, Art. 78i.

23.3. When a proposal for the suppression of a name has been referred to the appropriate committee for study, rejection of that name is authorized pending the committee's recommendation and its ratification. — ICBN, Art. 14.14; ICZN, Art. 80.

### Article 24

24.1. A name that has been widely and persistently used for a taxon or taxa not including its type is not to be used in a sense that conflicts with current usage unless and until a proposal to deal with it under Art. 22.1 or 23.1 has been submitted and rejected. — BC, Rule 37a; ICBN, Art. 57.1; ICZN, Art. 23b.

## CHAPTER IV. NAMES (BY RANK)

## SECTION 1. TAXA ABOVE THE RANK OF SUPERFAMILY

### Article 25

25.1. Names of taxa above the rank of superfamily are treated as nouns in the plural and are written with a capital initial letter. They may be either (a) typified names (see Art. 14.1) that are formed by adding a termination denoting their rank to the genitive singular stem of a generic name or exceptionally to the whole name, or (b) typeless names ('descriptive names')

that are formed differently, apply to taxa with a recognized circumscription, and may be used unchanged at different ranks. — ICBN, Art. 16.1.

25.2. For typified names, the name of a subphylum which includes the type of the adopted name of a phylum, the name of a subclass which includes the type of the adopted name of a class, or the name of a suborder which includes the type of the adopted name of an order, are to be based on the same type.

25.3. The typified name of a phylum or subphylum is formed from the same generic name as an acceptable name of an included class. The phylum name termination is -mycota for fungi, -phyta for other botanical taxa. The subphylum name termination is -mycotina for fungi, -phytina for other botanical taxa. — ICBN, Rec. 16A.1.

25.4. The typified name of a class or subclass is formed from the same generic name as an acceptable name of an included order. The class name termination is -mycetes for fungi, -phyceae for algae, -opsida for other botanical taxa. The subclass name termination is -mycetidae for fungi, -phycidae for algae, -idae for other botanical taxa. - ICBN, Rec. 16A.2.

25.5. The typified name of an order or suborder is formed from the same generic name as an acceptable name of an included family. The order name termination is -ales for all botanical and bacteriological taxa. The suborder name termination is -ineae for all botanical and bacteriological taxa. — BC, Rule 9; ICBN, Art. 17.1.

25.6. The name of a taxon above the rank of family may not have the termination -virinae, -virales, or viridae, because these terminations are reserved for the names of viral taxa (see Pre. 5).

25.7. When a name is published with a Latin termination not agreeing with the provisions of this Article, the termination is changed to accord with it, but the name retains its authorship and date. — ICBN, Art. 17.3; Rec. 16A.4.

## SECTION 2. FAMILY-GROUP TAXA

### Article 26

26.1. Family-group names are treated as nouns in the plural and are written with a capital initial letter. They are formed by adding to the genitive singular stem of a generic name, or to the whole name if necessary to avoid homonymy, a termination denoting their rank. BC, Rule 9; ICBN, Art. 18.1; ICZN, Art. 11f.

(a) The superfamily name termination is -oidea for zoological taxa. - ICZN, Rec. 29A.
(b) The family name termination is -aceae for all botanical and bacteriological taxa, -idae for zoological taxa. — ICZN, Art. 29a.
(c) The subfamily name termination is -oideae for all botanical and bacteriological taxa, -inae for zoological taxa. — ICZN, Art. 29a.
(d) The tribe name termination is -eae for all botanical and bacteriological taxa, -ini for zoological taxa. — ICZN, Rec. 29A.
(e) The subtribe name termination is -inae for all botanical and bacteriological taxa, -ina for zoological taxa.

26.2. The name of a family may not have the termination -viridae, and the name of a subfamily or subtribe may not have the termination -virinae, because these terminations are reserved for the names of viral taxa (see Pre. 5).

26.3. When a name is published with a Latin termination not agreeing with the provisions of this Article, the termination is changed to accord with it, but the name retains its authorship and date. Normally any required change will be made during the registration process. ICBN, Art. 18.4; ICZN, Art. 32c.

### Article 27

27.1. The establishment of any family-group name automatically establishes coordinate names, formed from the same generic name and having the same authorship and date, at all other ranks of the family-group. — ICBN, Art. 19.4; ICZN, Art. 36.

## SECTION 3. GENERA AND SUBDIVISIONS OF GENERA

### Article 28

28.1. The name of a genus is a noun in the singular, or a single word treated as such, and is written with a capital initial letter. It may not have the termination -virus because this termination is reserved for the names of viral genera (see Pre. 5). — BC, Rule 6 & 10a; ICBN, Art. 20.1; ICZN, Art. 4a, 11g.

28.2. The name of a subgenus is a combination of a generic name and a subgeneric epithet (of the same form as a generic name), the latter being placed between parentheses, or the two being connected by the term 'subgenus' (subg.). — BC, Rule 10a but see Rule 39a; ICBN, Art. 21.1; ICZN, Art. 4b, 6a.

28.3. Subgeneric names with plural adjectival epithets that were validly published prior to 1 January 2000 under the *International Code of Botanical Nomenclature* are not after that date considered as established names.

### Article 29

29.1. The establishment of any genus-group name automatically establishes a coordinate name at the other rank of the genus-group. The coordinate names have the same type, authorship and date; the generic name is identical with the subgeneric epithet. — ICBN, Art. 22.1; ICZN, Art. 43.

29.2. The name of any subdivision of a genus that includes the type of the accepted name of the genus to which it is assigned is to repeat the generic name unaltered as its epithet. Names published in explicit infringement of this rule cannot be established. – BC, see Rule 11; ICBN, Art. 21.2; ICZN, Art. 44.

29.3. The epithet in the name of a subdivision of a genus may not repeat unchanged the accepted name of the genus to which the taxon is assigned unless the two names have the same type. — ICZN, Art. 44.

### Article 30

30.1. The name of a section, subsection, series or subseries is a combination of a generic name and an epithet, the two being connected by the term denoting the rank. The epithet is either of the same form as a generic name, or a plural adjective which is written with a capital initial letter and agrees in gender with the generic name.

## SECTION 4. SPECIES AND INFRASPECIFIC TAXA

### Article 31

31.1. A name of a species consists of the name of a genus followed by a single specific epithet. The epithet may have the form of an adjective, a noun in the genitive, or a word in apposition; it is written with a lower-case initial letter. — BC, Rule 12a; ICBN, Art. 23.1; ICZN, Art. 5b.

31.2. In a name of a botanical taxon the specific epithet may not exactly repeat the generic name. — ICBN, Art. 23.4.

31.3. A name of a subspecies consists of the name of a species followed by a single subspecific epithet having the same form as a specific epithet, the two being optionally connected by the term 'subspecies' (subsp.). — BC, Rule 31a; ICZN, Art. 5b; ICBN, Art. 24.1.

31.4. In a species-group name, the final epithet, when adjectival in form and not used as a noun, agrees grammatically with the generic name. Errors in inflection are to be corrected, but the name retains its authorship and date. — BC, Rule 12a, 12c, 13b; ICBN, Art. 23.5; ICZN, Art. 32d.

31.5. The establishment of any species-group name automatically establishes a coordinate name at the other rank of the species-group. The coordinate names have the same type, authorship and date; their final epithets are identical. — ICZN, Art. 46.

**Article 32**

32.1. The name of any infraspecific taxon that includes the type of the accepted name of the species to which it is assigned is to repeat the specific epithet unaltered as its final epithet. Names published in explicit infringement of this rule cannot be established. — ICBN, Art. 26.1; ICZN, Art. 47.

32.2. The final epithet in the name of an infraspecific taxon may not repeat unchanged the epithet of the accepted name of the species to which the taxon is assigned unless the two names have the same type. — ICBN, Art. 27.1; ICZN, Art. 47.

**Article 33**

33.1. The name of an infra-subspecific taxon is a combination of the name of a species and an infraspecific epithet connected by the term denoting the rank. — ICBN, Art. 24.1.

33.2. Infra-subspecific epithets have the same form as subspecific epithets. Art. 31.4 applies by analogy. — ICBN, Art. 24.2.

## CHAPTER V. PROVISIONS FOR SPECIAL GROUPS

### SECTION 1. PLANT HYBRIDS AND CULTIVATED PLANTS

[Articles 34 and 35 are not reproduced here].

### SECTION 2. PARTS OF ORGANISMS, PORTIONS OF LIFE HISTORIES, AND TRACE FOSSILS

**Article 36**

36.1. Except as specified below [see also Article 3.2], names based on any part of an organism or portion of its life history are treated as applicable to the whole organism and compete for precedence as provided for in Art. 19–24. — ICZN, Art. 23f.

36.2. Names referring to specific organs of fossil botanical taxa (organ-taxa), or to mitotic asexual morphs (anamorphs) of ascomycetous and basidiomycetous fungi (excluding those forming lichens) with a pleomorphic life history, are names of form-taxa. These names are applicable only to the organ or morph represented by their type, not to the whole fossil, or to the fungus in all its morphs (holomorph), which is considered to be represented by its meiotic sexual morph (the teleomorph, characterized by the production of asci/ascospores, basidia/basidiospores, teliospores, or other basidium-bearing organs). — ICBN, Art. 59.1.

36.3. The provisions of this article shall not be construed as preventing the publication and use of binomina for form-taxa when it is thought necessary or desirable to refer to fungal anamorphs alone, or to specific organs of botanical fossils, even though the holomorph or whole fossil organism may be known and have been named. For the name of a fossil botanical

genus, the author's intent (as apparent from the original description, the material he used, and often from the name itself) is essential in establishing whether it applies to an organ-genus only. Names of fossil botanical taxa in ranks lower than genus are considered to apply to an organ-taxon if they are subordinate to the name of an organ-genus. When their epithet is later transferred to a genus of whole-organism fossils, the new combination is deemed to be the name of a whole-organism taxon and as such takes the date of the transfer, without change of type. — ICBN, Art. 59.5.

36.4. For a name of a taxon of pleomorphic fungi it is the nature of the type that determines whether the name applies to a form-taxon (anamorph) or to the whole taxon (holomorph), irrespective of the nature of the higher ranking taxon to which the named taxon was originally assigned. — ICBN, Art. 59.3.

36.5. Unless the type of a name of a pleomorphic fungus represents the teleomorphic state, and unless the original description or diagnosis refers to this morph, the name is deemed to refer to the anamorph alone. — ICBN, Art. 59.2.

36.6. Names referring to the fossilized work of organisms (ichnotaxa) are applicable only to that work, not to the organism responsible for the work. ICZN, Art. 23g (iii).

## CHAPTER VI. ORTHOGRAPHY AND GENDER OF NAMES

### Article 37

37.1. The original spelling of a name or epithet is to be retained, except for the correction of typographical or orthographical errors, the standardization of terminations required by Art. 39, and the mandatory corrections imposed hereunder. — BC, Rule 61; ICBN, Art. 60.1; ICZN, Art. 32b.

37.2. For names of taxa published on or after 1 January 2000, the words 'original spelling' in this Article mean the spelling employed when the name was submitted for registration. As a rule, the required corrections and standardizations will be made during the registration process. — ICBN, Art. 60.2.

37.3. Names consist exclusively of letters of the Latin alphabet, which is taken to include j, k, w and y (rare or absent in classical Latin). When other letters and ligatures foreign to classical Latin or diacritical signs appear in a name, they are transcribed or deleted. The diaeresis, indicating that a vowel is to be pronounced separately from the preceding vowel, is not part of the orthography of a name or epithet. — BC, Rule 64; ICBN, Art. 60.4; 60.6; ICZN, Art. 27, 32 [other details explicitly provided for in version 2 to be dealt with by way of Recommendations].

37.4. When a name has been published in a work where the letters u, v or i, j are used interchangeably or in any other way incompatible with modern practices (one of those letters is not used, or used only in capitals), those letters are transcribed in conformity with modern usage. — ICBN, Art. 60.5.

37.5. A hyphen in a compound epithet is deleted, except if it links a single letter to a whole word, if an epithet is formed of words that usually stand independently, or if the letters before and after the hyphen are the same, when a hyphen is permitted (see Art. 31.1). — BC, Rule 12a; ICBN, Art. 60.9; ICZN, Art. 31d.

37.6. An apostrophe in an epithet is deleted. — ICBN, Art. 60.10.

37.7. The letters -ae-, when used for linking the elements of a compound adjectival epithet, are corrected to -i- unless they serve to establish an etymological distinction. BC, see App. 9b; ICBN, Art. 60.8.

37.8. The use of terminations in epithets commemorating persons is standardized [to be specified]. — BC, App. 9A; ICBN, Art. 60.11.

37.9. Epithet spellings that are contrary to the standard spellings [to be specified] are corrected.

37.10. Epithets of fungus names derived from the generic name of the host plant but spelled differently are corrected to reflect the accepted spelling of the host's name. — ICBN, Rec. 60H.1.

**Article 38**

38.1. For the purpose of this Code, orthographical variants are the various spelling, compounding, and inflectional forms of a name or its epithet (including typographical errors), only one type being involved. — BC, Rule 57b; ICBN, Art. 61.2.

38.2. Confusingly similar names based on the same type are also treated as orthographical variants. — BC, see Rule 57c, 62a.

38.3. Only one orthographical variant of any one name is treated as established, which, except as provided in Art. 37 (typographical or orthographical errors and standardizations), and Art. 22.11 (conserved spellings), is the form which appears in the original publication. BC, Rule 57c & 61; ICBN, Art. 61.5; ICZN, Art. 32b.

38.4. The orthographical variants of a name are to be corrected to the established form of that name. Whenever such a variant appears in print, it is to be treated as if it were printed in its corrected form. — BC, Rule 61; ICBN, Art. 61.4; ICZN, Art. 32c.

38.5. If orthographical variants of a name appear in the original publication, the one that conforms to the rules and best suits current usage is retained; other things being equal, the first author who, in publication, explicitly adopts one of the variants, rejecting the other(s), is followed. — BC, Rule 58; ICBN, Art. 61.3; ICZN, Art. 24.

**Article 39**

39.1. A generic name is treated as a noun of masculine, feminine or neuter gender. Gender is established on the basis of classical Latin and Greek grammar as modified by subsequent biological usage. In case of doubt, the gender assigned by the author of the name or, failing this, by the first subsequent author to assign a gender to the name, is accepted. — BC, Rule 65; ICBN, Art. 62.1.

39.2. Compound generic names take the gender of the last word in the nominative case in the compound. [The most usual words used in compounding generic names will be specified]. BC, Rule 65.

39.3. The gender of generic names often depends on their termination. The most usual terminations used in forming generic names, together with their gender, are listed in Annex ... — BC, App. 9; ICBN, Art. 62.2.

39.4. When a new generic name is submitted for registration without indication of gender, or with an indication of gender that is contrary to the Code, the gender is assigned or corrected during registration. — BC, see Rule 65 (3).

## CHAPTER VI. AUTHOR CITATION

**Article 40**

40.1. In publications dealing with the taxonomy and nomenclature of organisms, it may be necessary, for accurate and complete indication of the name of a taxon, to cite the name of the author(s) who established the name concerned and the date of its establishment. When this is done the following rules apply. BC, Rule 33b Note 1; ICBN, Art. 46.1; ICZN, Art. 50.

40.2. A name of a new taxon is to be attributed to the author or authors to whom both the name and the original description or diagnosis were ascribed, even though authorship of the publication may be different. A new combination or replacement name is to be attributed to the author or

authors to whom it was ascribed in the original publication, when this contribution is explicitly acknowledged there. Art. 40.5 notwithstanding, authorship of a new name or combination must always be accepted as ascribed, even when it differs from authorship of the publication, when at least one author is common to both. — ICBN, Art. 46.2.

40.3. When authorship of a name differs from authorship of the publication in which it appears, both are sometimes cited, connected by the word 'in'. In such a case, 'in' and what follows are part of a bibliographic citation and are better omitted unless the place of publication is being referred to, at least by its date. – BC, Adv. Note B(2); ICBN, Art. 46 Note 1.

40.4. For the purposes of this Article, ascription is the direct association of the name of a person or persons with a new name or description or diagnosis of a taxon. Mention of an author's name in a list of synonyms is not ascription, nor is reference to a basionym or a replaced synonym, including bibliographic errors, nor is reference to a homonym. ICBN, Art. 46.3.

40.5. A name of a new nominal taxon is to be attributed to the author or authors of the publication in which it appears when only the name but not the original description or diagnosis was ascribed to a different author or different authors. A new combination or a replacement name is to be attributed to the author or authors of the publication in which it appears, even when it was ascribed to a different author or to different authors, when in the publication in which it appears their contribution is not explicitly acknowledged. However, in both cases authorship as ascribed, followed by 'ex', may be inserted before the name(s) of the publishing author(s). — ICBN, Art. 46.4.

40.6. In determining the correct author citation, only internal evidence in the publication in which the name appears is to be accepted, including ascription of the name, statements in the introduction, title, or acknowledgements, and typographical distinctions in the text. In this context, all publications appearing under the same title and by the same author, such as different parts of a flora issued at different times (but not different editions of the same work), is to be considered as a whole. — ICBN, Art. 46.6.

40.7. Authors publishing new names and wishing to establish that other persons' names followed by 'ex' may precede theirs in authorship citation may adopt the 'ex' citation in the protologue. — BC, Rule 33c; ICBN, Art. 46 Note 2.

### Article 41

41.1. When a genus or a taxon of lower rank is altered in rank, or is transferred to another genus or species, but retains its name or final epithet, the author of the earlier, name- or epithet-bringing acceptable name (the author of the basionym) is cited in parentheses, optionally followed by the name of the author who effected the alteration (the author of the new name). — BC, Rule 33b; ICBN, Art. 49.1; ICZN, Art. 51c.

## DIVISION III. AUTHORITY

1. The *BioCode* is placed under the joint authority of the International Union of Biological Sciences (IUBS) and of the International Union of Microbiological Societies (IUMS), to be exercised through an inter-union International Committee on Bionomenclature (ICB).

2. The ICB consists of a chairperson appointed by the Executive Committee of IUBS and the Executive Board of IUMS, and eight members, similarly appointed in consultation with the five international bodies concerned, as follows: two representing The General Committee on Botanical Nomenclature (GCBN), two representing the International Commission on Zoological Nomenclature (ICZN), two representing the International Committee on Systematic Bacteriology (ICSB), one representing the International Commission for the Nomenclature of Cultivated Plants (ICNCP), and one representing the International Committee on the Taxonomy of Viruses (ICTV).

3. The *BioCode* will take effect from a date established by the ICB, as soon as practicable, but not before the necessary provisions on authority transfer have been approved by the bodies

responsible for the present (special) Codes: an International Botanical Congress for botany (including mycology), the IUBS General Assembly for zoology, and an International Congress of Bacteriology for bacteriology.

4. The ICB has power to resolve present and future ambiguity concerning the provisions of the *BioCode*, in particular those rules that affect only certain categories of organisms. It shall, in particular — and for nomenclatural purposes only — assign to the jurisdiction of one of the three traditional Codes those organisms that have been or still are treated under different special Codes by different workers. In case of controversy, it will take its decision after due consultation among the specialists in the groups concerned.

5. The first and future editions of the *BioCode* are published under the auspices of IUBS and IUMS in association with the copyright holders for the special Codes.

6. The ICB has powers to edit future editions of the *BioCode*, and to amend its provisions where necessary. Any proposed change of substance must, however, be subject to public discussion before being approved, as follows:

6.1. Any proposal for a change must be published beforehand in the appropriate official organs, *Taxon* (for the GCBN), the *Bulletin of Zoological Nomenclature* (for the ICZN), the *International Journal of Systematic Bacteriology* (for the ICSB), and also submitted for publication in other appropriate media such as *Biology International* (IUBS), *Hortax News* (ICNCP), and *Virology Division News* (ICTV).

6.2. After one year, and taking into account any comments received, the GCBN, ICSB, ICTV and ICZN will each inform the ICB of their opinions and recommendations concerning the proposal.

6.3. The ICB will act on the proposal in the light of these opinions, a 75% majority of voting members being required for the approval of a change.

6.4. Any adopted change that is not of a retroactive nature will take effect from a date established by the ICB, but not prior to the publication of an edition of the *BioCode* that embodies the change.

7. The ICB takes responsibility for the coordination of a world-wide network of registration offices. It also supervises and coordinates the work of the registration centres that record, maintain and disseminate the registration data.

8. IUBS and IUMS will be responsible for convening an International Consultative Group on Bionomenclature, comprising representatives of pertinent inter-governmental bodies and agencies, which will be charged with the development of mechanisms to maintain the registration systems developed in consultation with the ICB.

9. Proposals for the conservation or suppression of names, requests for binding decisions on confusability of names, and applications for the adoption of lists of names in current use, may be submitted to the ICB to be forwarded to the responsible bodies (presently GCBN, ICZN, or ICSB, as the case may be). They may also be submitted directly to those bodies. They will then be acted upon in the same way as under the special Codes; this action is to be ratified by the ICB. — ICBN, Art. 14.12–14.14, 53.4, 56; Div. III.2; ICZN, Art. 79.

## Case 2978

## *Plumularia* Lamarck, 1816 (Cnidaria, Hydrozoa): proposed conservation by the designation of *Sertularia setacea* Linnaeus, 1758 as the type species

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**Abstract.** The purpose of this application is to conserve the current use of the name *Plumularia* Lamarck, 1816 for a familiar, near-cosmopolitan genus of thecate hydroids by setting aside two overlooked type species designations. Recognition of the first of these, due to Busk (1851), would result in the name *Plumularia* becoming a junior subjective synonym of *Aglaophenia* Lamouroux, 1812. The second, due to Apstein (1915), would result in the name *Plumularia* being applied to the genus of hydroids long known as *Kirchenpaueria* Jickeli, 1883. In both cases a new name would become necessary for *Plumularia* as long understood. It is proposed that the designation by Broch (1918) of *Sertularia setacea* Linnaeus, 1758 be formally adopted.

**Keywords.** Nomenclature; taxonomy; Hydrozoa; hydroids; *Plumularia*; *Plumularia setacea*.

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1. The marine hydroid superfamily PLUMULARIOIDEA Agassiz, 1862 includes several near-cosmopolitan genera. Our application concerns the names of three of them which, at least in temperate latitudes, form conspicuous colonies which can be found intertidally. Their names, *Aglaophenia*, *Plumularia* and *Kirchenpaueria*, are consequently familiar to many non-specialists. Some overlooked type species designations threaten the stability of these names, which our application seeks to protect.

2. Lamouroux (1812, p. 184) included five nominal species in his new genus *Aglaophenia*, one of which was *Sertularia pluma* Linnaeus, 1758 (p. 811), but he did not designate a type species.

3. The genus *Plumularia* Lamarck (1816, p. 123) originally included 17 nominal species, among them *Sertularia pinnata* and *S. setacea*, both of Linnaeus (1758, p. 813), and *Plumularia cristata* Lamarck, 1816 (p. 125). The last name was a new name for *Sertularia pluma* Linnaeus, 1758 and hence its junior objective synonym. The publication date for Lamarck's work was given on the title page as March 1816 and this date was accepted by Sherborn (1922, p. lxxvii).

4. Several of the species assigned to *Plumularia* by Lamarck (1816) were referred to *Aglaophenia* Lamouroux, 1812 by Lamouroux (1816, pp. 164–174). These included *Sertularia pinnata* and *S. setacea*. The publication date of Lamouroux's (1816) work was given by Sherborn (1922, p. lxvii) as October 1816.

5. Busk (1851, p. 118) subsequently designated *Plumularia cristata* Lamarck, 1816 as the type species of *Plumularia*. This designation, although valid, is not in accord with the concept of the genus that has been accepted for most of the present century, and it has been overlooked. Recognition of Busk's type designation would render the name *Plumularia* Lamarck, 1816 a junior subjective synonym of *Aglaophenia* Lamouroux, 1812 (see para. 7 below), to the detriment of the accepted use of both names.

6. Busk (1851, p. 118) stated *Plumularia* to be 'an artificially constructed genus', implying that it merited splitting. He noted (p. 119) that, if the genus were eventually to be divided, 'those species of which *Plumularia setacea* may be taken as the type, would form a second genus'. Busk thus came close to conceiving the modern concepts of the two genera *Aglaophenia* and *Plumularia*, although had his inclinations been followed *setacea* would have been assigned to *Aglaophenia* and *cristata* to *Plumularia*, the reverse of almost all subsequent practice.

7. The name *Plumularia* was for many years generally regarded as synonymous with *Aglaophenia*, albeit by some authors provisionally (see Johnston, 1847 and Busk, 1851; para. 5 above). The distinction hinted at by Busk (1851) was introduced by McCrady (1859, pp. 199 203). It was accepted by Agassiz (1862, p. 358) and has been supported by essentially all authorities. The two genera became the bases of the families PLUMULARIIDAE Agassiz, 1862 and AGLAOPHENIIDAE Marktanner-Turneretscher, 1890 (p. 262), which are still in use today.

8. McCrady (1859, p. 201), in discussing the genus *Aglaophenia*, stated 'I take *Plumularia cristata* as the nucleus of this group'. This statement does not constitute a valid type species designation because *P. cristata* was not among the five nominal species originally included in *Aglaophenia* by Lamouroux (1812) and McCrady did not mention the senior objective synonym *Sertularia pluma* Linnaeus, 1758 (para. 3 above). *S. pluma* was designated the type species of *Aglaophenia* by Apstein (1915, p. 126), and this accords both with McCrady's concept of the genus and with previous, subsequent and current use (see, for example, Svoboda & Cornelius, 1991, p. 10).

9. *Sertularia pinnata* Linnaeus, 1758 was designated in the same paper by Apstein (1915, p. 127) as the type species of *Plumularia*. Apstein's invalid designation has sensibly been disregarded (see Broch, 1918, pp. 52 53; Cornelius, 1995, p. 158). *S. pinnata* was later designated the type species of another genus, *Kirchenpaueria* Jickeli, 1883 (p. 645, pl. 28, figs. 25–28), by Broch (1918, p. 195). The genus *Kirchenpaueria* is commonly recognised and the name widely used, but acceptance of Apstein's (1915) designation would render *Kirchenpaueria* a junior objective synonym of *Plumularia*, upsetting established use. *Kirchenpaueria* is the type genus of KIRCHENPAUERIINAE Stechow, 1921 (p. 259). This name has been employed in major works, in at least one (Bouillon, 1985) at family level but in more (see, for example, Millard, 1975; Cornelius, 1995) for a subfamily of the PLUMULARIIDAE.

10. Broch (1918, p. 195) attempted to resolve the potential nomenclatural problem introduced by Apstein (1915) (para. 9 above) by designating *Plumularia setacea* as the

type species of *Plumularia*, and this accords with common use before and since. This designation was cited in a major work by Millard (1975) but it is invalid because of the earlier designations by Busk (1851) and by Apstein (1915) (paras. 5 and 9 above; Cornelius, 1995, p. 158). Since Broch (1918) the name *Plumularia* has been applied consistently to a genus having *Sertularia setacea* Linnaeus, 1758 as its type species, and *Kirchenpaueria* has been applied to that having *S. pinnata* Linnaeus, 1758 as its type (see, for example, Medel & Vervoort, 1995, p. 56; Cornelius, 1995, pp. 129 and following; and numerous papers cited in these works).

11. To maintain accepted use of the well-known name *Plumularia* Lamarck, 1816 and to prevent its loss in the synonymy of *Aglaophenia* Lamououx, 1812, needlessly upsetting 150 years of stable use of both names, we propose that Busk's (1851) designation of *Plumularia cristata* as the type species of *Plumularia* be set aside. We also propose that Apstein's (1915) designation of *Sertularia pinnata* as the type species be set aside. If adopted, this designation would result in *Plumularia* becoming the valid name for the group of species now known as *Kirchenpaueria* and the latter being lost as a junior objective synonym; a new name would be needed for *Plumularia* as currently understood. The name *Kirchenpaueria* has been intermittently used, always in its original sense, for 113 years and, since Broch (1918), has been almost universally adopted. Stability of hydroid nomenclature would not be served by accepting either of these two designations and we propose that the designation of *Sertularia setacea* by Broch (1918) as the type species of *Plumularia* be accepted.

12. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to set aside all previous designations of type species for the nominal genus *Plumularia* Lamarck, 1816 prior to that by Broch (1918) of *Sertularia setacea* Linnaeus, 1758;

(2) to place on the Official List of Generic Names in Zoology the name *Plumularia* Lamarck, 1816 (gender: feminine), type species by subsequent designation by Broch (1918) *Sertularia setacea* Linnaeus, 1758, as ruled in (1) above;

(3) to place on the Official List of Specific Names in Zoology the name *setacea* Linnaeus, 1758, as published in the binomen *Sertularia setacea* (specific name of the type species of *Plumularia* Lamarck, 1816).

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## Case 2935

## *Lirobarleeia* Ponder, 1983 (Mollusca, Gastropoda): proposed designation of *Alvania nigrescens* Bartsch & Rehder, 1939 as the type species

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**Abstract.** The purpose of this application is to designate *Alvania nigrescens* Bartsch & Rehder, 1939 as the type species of the gastropod genus *Lirobarleeia* Ponder, 1983 (family BARLEEIDAE Gray, 1857). *A. nigrescens* is common in shallow water surrounding the Galapagos Islands and is the species on which the genus was based. Ponder's (1983) designated type species was erroneously identified as *Alvania galapagensis* Bartsch, 1911, a similar deep water species known only from the type material.

**Keywords.** Taxonomy; nomenclature; Gastropoda; *Lirobarleeia*; *Lirobarleeia nigrescens*; *Lirobarleeia galapagensis*; Galapagos Islands.

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1. Ponder (1983, p. 243) established the genus *Lirobarleeia* based on his study (pp. 233–242) of a number of species of the family BARLEEIDAE Gray, 1857. He designated *Alvania galapagensis* Bartsch, 1911 (pp. 347, pl. 30, fig. 9) as the type of the genus, believing his work on the anatomical, radular, opercular and shell characteristics to be conducted on specimens of this species. The species Ponder studied and described as the type of *Lirobarleeia* is common in shallow water in the Galapagos Islands, whereas the true *A. galapagensis* is known from a single lot (the holotype and two paratypes, catalog no. USNM 207590, in the United States National Museum, Washington) dredged from deep waters (1160 meters) near the Galapagos Islands by the U.S. Fisheries Bureau steamer *Albatross*. Ponder's (1983, figs. 12A D) illustrations were of specimens from Santa Cruz Island in the Galapagos, now housed in the Australian Museum, Sydney: the shell, protoconch and operculum were of specimen no. AMS C.137206 and the radula was of specimen no. AMS C.137207.

2. Hertz (1994, figs. 1–3) figured the holotype of *Alvania galapagensis* Bartsch, 1911 and specimen AMS C. 137206 identified by Ponder (1983) as *A. galapagensis*, and described the differences between the two. Ponder (1983, p. 244) synonymized his '*A. galapagensis*' with *Alvania nigrescens* Bartsch & Rehder, 1939 (p. 8, pl. 2, fig. 5) and Hertz (1994, p. 110) confirmed the type species of *Lirobarleeia* as *A. nigrescens*. This species was originally described and illustrated from a single specimen (catalog no. USNM 472621 in the United States National Museum), collected during Franklin D. Roosevelt's 1938 Presidential cruise from San Diego, California to

Pensacola, Florida via the Panama Canal, and reportedly (pp. 8, 18) found in a tide pool on Old Providence Island in the Caribbean Sea (Isla de Providencia, Colombia). However, the locality data are probably incorrect and the true type locality was the Galapagos Islands where the expedition extensively collected during the cruise (see Ponder, 1983, p. 244; Hertz, 1994, p. 113). No specimens of this species have been reported from the Caribbean in the 57 years since *A. nigrescens* was first found.

3. *Lirobarleeia nigrescens* (Bartsch & Rehder, 1939) is the most common species of *Lirobarleeia* in the Galapagos Islands but has been misidentified in the past because of its general similarity to *Alvania galapagensis* Bartsch, 1911. The latter is a deep water species that is more pear-shaped, with more flattened and widely separated nodes and less channeled sutures than *L. nigrescens*. *A. galapagensis* is known only from the holotype and two paratypes and no live specimens have ever been collected. Its correct generic placement is uncertain; it is tentatively included in *Lirobarleeia* based only on shell characters since as yet there have been no anatomical studies. Consequently, because so little is known about this taxon, and because its generic placement has not been confirmed, it would not be suitable as the type species of *Lirobarleeia*.

4. Hertz (1994, p. 116) noted that, since Ponder's extensive anatomical studies to support the creation of the genus *Lirobarleeia* were all conducted on specimens of *L. nigrescens* (*L. galapagensis* of Ponder, 1983) and it was clearly this species that was intended as the type of *Lirobarleeia*, it seemed appropriate that *L. nigrescens* be specified as the type species of the genus. We are accordingly submitting our application to the Commission under the provisions of Articles 70b and 79a of the Code.

5. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to set aside all previous fixations of type species for the nominal genus *Lirobarleeia* Ponder, 1983 and to designate *Alvania nigrescens* Bartsch & Rehder, 1939 as the type species;

(2) to place on the Official List of Generic Names in Zoology the name *Lirobarleeia* Ponder, 1983 (gender: feminine), type species by designation in (1) above *Alvania nigrescens* Bartsch & Rehder, 1939;

(3) to place on the Official List of Specific Names in Zoology the name *nigrescens* Bartsch & Rehder, 1939, as published in the binomen *Alvania nigrescens* (specific name of the type species of *Lirobarleeia* Ponder, 1983).

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## Case 2977

# *Arca pectunculoides* Scacchi, 1834 and *A. philippiana* Nyst, 1848 (currently *Bathyarca pectunculoides* and *B. philippiana*; Mollusca, Bivalvia): proposed conservation of the specific names

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**Abstract.** The purpose of this application is to conserve the specific names of *Arca pectunculoides* Scacchi, 1834 and *A. philippiana* Nyst, 1848 for two European bivalves. Since 1978 the name *Arca grenophia* Risso, 1826 has been generally, but incorrectly, adopted as a senior synonym of *A. pectunculoides*, the type species of *Bathyarca* Kobelt, 1891; however, *A. grenophia* is conspecific with *A. philippiana*. Use of *A. grenophia* in place of *A. philippiana* would create considerable confusion and its suppression is proposed. Both *A. pectunculoides* and *A. philippiana* are widely distributed from Norway to southern Morocco, the Canary Islands, the Azores and seamounts of the North Atlantic, and the Mediterranean. Both were originally described from Pleistocene fossils.

**Keywords.** Nomenclature; taxonomy; Mollusca; Bivalvia; *Bathyarca*; *Bathyarca pectunculoides*; *B. philippiana*; *B. grenophia*.

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1. Risso (1826, p. 313) described *Arca grenophia* from a shell from the 'régions coralligènes' of the surroundings of Nice in Mediterranean France. He did not illustrate the taxon. Jeffreys (1879, p. 573) used the name *Arca pectunculoides* Scacchi, 1834 as valid (see paras. 2 and 6 below) and noted: 'Risso described this species in 1826 as *A. grenophia*; but the name [*grenophia*] may be considered obsolete'. Kobelt (1891, p. 213) and Lamy (1907, p. 279) cited Jeffreys's (1879) comment but neither used the name *A. grenophia*; Lamy had no access to Risso's types which were donated to the Muséum National d'Histoire Naturelle, Paris only in 1927. The name *Arca grenophia* was then ignored until 1978 (para. 6 below).

2. Scacchi (1834, p. 82) described *Arca pectunculoides* from a Pleistocene fossil from Gravina di Puglia, province of Bari, southern Italy, and later (1835, p. 18, pl. 1, figs. 12a b) figured it accurately. Some subsequent authors have cited 1833 for Scacchi's description, others have given 1834. The confusion in dating Scacchi's publications was noted by Boss (1968, p. 35), who gave 1834 as the correct date of appearance of vol. 6 of *Annali Civili del Regno delle due Sicilie*. Philippi (1844, p. 44, pl. 15, fig. 3) also gave a good description and illustration of *A. pectunculoides* in a book which became well known, and stated that he had obtained specimens from

Scacchi. This established the name in the European literature and its use was followed by several authors (see, for example, Weinkauff, 1867, p. 201; Monterosato, 1875, p. 12; Jeffreys, 1879, p. 572; Hidalgo, 1917, p. 147; Dautzenberg, 1927, p. 280; Coen, 1933, p. 96; Ockelmann, 1958, p. 41; Tebble, 1966, p. 32; Bowden & Heppell, 1966, p. 102; Nordsieck, 1969, p. 22).

3. Philippi (1844, p. 43, pl. 15, fig. 2) described and illustrated *Arca obliqua* from a Pleistocene fossil from the Lamato valley, province of Catanzaro, southern Italy. The exact date of Philippi's publication is uncertain; under Article 21c(ii) of the Code it must be taken as December 1844. *A. obliqua* Philippi was generally accepted as a valid species but authors noted that the name was preoccupied by *Arca obliqua* Portlock, 1843 (p. 429, pl. 34, fig. 6) and *A. obliqua* Reeve, 1844 (February; *Arca*, pl. 6, species 41). Nyst (1848, p. 54) renamed Philippi's species *Arca philippiana*. Locard (1899, p. 158) did not mention that the name *A. obliqua* was preoccupied nor that it had been replaced but emended it to *A. obliquata*, also preoccupied (by *A. obliquata* Wood, 1828, p. 6, pl. [2], fig. [5b] and by *A. obliquata* Zieten, 1833, p. 93, pl. 70, figs. 2a, 2b). Dautzenberg (1927, p. 281) also overlooked Nyst's name and renamed the species *A. obliquatula*. The name *A. philippiana* was cited, but not used, by Lamy (1907, p. 288) but it has become established in the literature in the last few decades (see, for example, Regteren Altena, 1962, p. 2; Nordsieck, 1969, p. 22; Piani, 1980, p. 181; Hoisaeter, 1986, p. 116; Sabelli, Giannuzzi-Savelli & Bedulli, 1990, p. 278; Smith & Heppell, 1991, p. 59; Poppe & Goto, 1993, p. 44).

4. Kobelt (1891, p. 213) established the new nominal taxon *Bathyarca*. Under *Arca pectunculoides* Scacchi, 1834, one of the originally included nominal species, Kobelt noted (in translation) 'I will establish the subgenus *Bathyarca* for this species'. *A. pectunculoides* is thus the type species of *Bathyarca* by original designation. *Bathyarca* is cosmopolitan and from geological horizons of Eocene to Recent. It has been considered as valid by Newell (1969, p. 254) and by Oliver & Allen (1980, p. 45), among others.

5. Arnaud (1978, p. 119) revised Risso's molluscan types in the Paris Muséum and designated the single valve in the Risso collection as the lectotype of *Arca grenophia*. He noted that *A. grenophia* was a senior synonym of *Arca pectunculoides* and, unlike Jeffreys a century earlier, adopted the earlier name. This has been followed, and the name *A. grenophia* adopted, by a majority of recent authors: Piani (1980, p. 181), Rolan (1989, p. 64), Sabelli, Giannuzzi-Savelli & Bedulli (1990, p. 278), Smith & Heppell (1991, p. 59), Cossignani, Cossignani, Di Nisio & Passamonti (1992, fig. 264), Oliver & Cosel (1992, p. 359), Poppe & Goto (1993, p. 44). The publications include checklists and taxonomic works which are intended to stand as references for many years. A few authors (Hoisaeter, 1986, p. 116 and Barash & Danin, 1992, p. 234) have ignored the change and continued to use the name *Bathyarca pectunculoides*.

6. A re-examination of Risso's *A. grenophia* lectotype in the Paris Muséum shows that it is conspecific with *A. philippiana* Nyst, 1848, and not with *A. pectunculoides* Scacchi, 1834, as assumed since 1879. The lectotype agrees with Risso's original figure (not published until Arnaud, 1978, pl. 12, fig. 225) so it is quite certain that the specimen is actually Risso's type. The specimen is elongate (7 mm), its hinge has seven anterior and 11 posterior teeth, and externally the shell has a radial depression in its anterior third, all enabling unambiguous identification as *A. philippiana*.

*A. pectunculoides* is smaller, has only three teeth on each side of the hinge, and is shorter and regularly convex. The use of the name *A. grenophia* in the sense defined by Risso's type specimen would lead to considerable confusion. To remove the ambiguity of usage of *A. grenophia* as a senior synonym of *A. pectunculoides*, and to conserve the name *A. philippiana*, we propose that *A. grenophia* Risso, 1826 be suppressed.

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the specific name *grenophia* Risso, 1826, as published in the binomen *Arca grenophia*, for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;

(2) to place on the Official List of Generic Names in Zoology the name *Bathyarca* Kobelt, 1891 (gender: feminine), type species by original designation *Arca pectunculoides* Scacchi, 1834;

(3) to place the following names on the Official List of Specific Names in Zoology:
   (a) *pectunculoides* Scacchi, 1834, as published in the binomen *Arca pectunculoides* (specific name of the type species of *Bathyarca* Kobelt, 1891);
   (b) *philippiana* Nyst, 1848, as published in the binomen *Arca philippiana*;

(4) to place the following names on the Official Index of Rejected and Invalid Specific Names in Zoology:
   (a) *grenophia* Risso, 1826, as published in the binomen *Arca grenophia* and as suppressed in (1) above;
   (b) *obliqua* Philippi, 1844, as published in the binomen *Arca obliqua* (a junior homonym of *Arca obliqua* Portlock, 1843 and of *A. obliqua* Reeve, 1844);
   (c) *obliquata* Locard, 1899, as published in the binomen *Arca obliquata* (a junior objective synonym of *Arca obliqua* Philippi, 1844 and of *A. philippiana* Nyst, 1848, and a junior homonym of *Arca obliquata* Wood, 1828 and of *A. obliquata* Zieten, 1833);
   (d) *obliquatula* Dautzenberg, 1927, as published in the binomen *Arca obliquatula* (a junior objective synonym of *Arca obliqua* Philippi, 1844 and of *A. philippiana* Nyst, 1848).

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## Case 2992

## *Parapronoe crustulum* Claus, 1879 (Crustacea, Amphipoda): proposed conservation of the specific name

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**Abstract.** The purpose of this application is to conserve the specific name of *Parapronoe crustulum* Claus, 1879 for a pelagic amphipod (family PRONOIDAE) which is widely distributed in tropical and temperate oceans. The name is in universal use but is threatened by a senior subjective synonym which has been incorrectly used for an entirely different species. The earlier name is *Typhis rapax* Milne-Edwards, 1830, which has been regarded as a synonym of *Hemityphis tenuimanus* Claus, 1879 (family PLATYSCELIDAE) since Stephensen (1925). A recent examination of the syntypes of *T. rapax* in the Muséum National d'Histoire Naturelle, Paris has demonstrated that they are conspecific with *P. crustulum*.

**Keywords.** Nomenclature; taxonomy; Amphipoda; *Parapronoe crustulum*; *Hemityphis tenuimanus*; *Hemityphis rapax*; pelagic amphipods.

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1. The specific name of *Typhis rapax* was established by Milne-Edwards (1830, p. 395) for a specimen or specimens found in the latitude of the Canary Islands. The species was distinguished from another new species (*T. ferus*) by means of a key but no additional description or locality data was given. Ten years later Milne-Edwards (1840, p. 97) provided a brief description and said of the locality 'Cette espèce se trouve dans les mêmes parages que la précédente', referring to *Typhis ferus* which was captured near the Canary Islands.

2. The specific name of *Typhis rapax* is listed by Milne-Edwards (1838, p. 286), and Bate (1862, p. 329) repeated Milne-Edwards's (1840) description. Apart from these two references it is not referred to again as a species of *Typhis*; its status is considered uncertain due to the brief description and lack of illustrations. Claus (1879, p. 6) thought that Milne-Edwards's species might belong to his genus *Schizoscelus* Claus, 1879, and Bovallius (1887, p. 44) listed it as such. On the other hand, Stebbing (1888, p. 1503) believed that it most likely belonged to the PRONOIDAE.

3. Stephensen (1925, p. 220), under the specific name of *Hemityphis tenuimanus* Claus, 1879, reported 'Quite by chance we are able to prove with certainty that *Typhis rapax* is *Hemityphis tenuimanus*, in that our Zool. Mus. possesses a specimen ♂, 5 mm, somewhat defective, from the 'Atlantic', presented in Kröyer's time by Milne-Edwards under the name of *T. rapax*; though the chela of p. 2 is broken there is no doubt that it is *H. tenuimanus*'.

4. The specific name of *Hemityphis tenuimanus* was established by Claus (1879, p. 12) who gave a relatively detailed description followed by good illustrations in

1887 (pl. 4, figs. 1–13). This nominal species was therefore well established and easily recognised and, until Stephensen (1925), was referred to in the scientific literature by Stebbing (1888, p. 1472); Chevreux (1900, p. 149) and Stewart (1913, p. 259).

5. Most researchers since 1925 have accepted Stephensen's suggested synonymy of *T. rapax* and *H. tenuimanus*, referring to the species described by Claus in 1879 as *Hemityphis rapax* (Milne-Edwards, 1830). The only exceptions seem to be Spandl (1927, p. 233) who must have been unaware of Stephensen's remarks, and Vinogradov et al. (1982, p. 446) and Vinogradov (1990, p. 85; 1993, p. 46) who did not accept the proposed synonymy.

6. Recently I examined two specimens labelled *Typhis rapax* Milne-Edwards, 1830 in the collections of the Muséum National d'Histoire Naturelle, Paris (MNHN-Am4809) and determined not only that they are the syntypes but that they are the same species as *Parapronoe crustulum* Claus, 1879 (Zeidler, 1996). As mentioned above, Stebbing (1888, p. 1503) suggested that Milne-Edwards's species may belong to the PRONOIDAE and the description given by Milne-Edwards (1840, p. 97) is not inconsistent with *P. crustulum*. In fact Milne-Edwards described the first pair of pereopoda as simple, which is unlike *H. tenuimanus* in which the first pereopoda are partly chelate.

7. The specific name of *Parapronoe crustulum* was established by Claus (1879, p. 31) who gave an adequate description, followed by good illustrations in 1887 (pl. 15, figs. 1–15). The species is readily distinguished from its three currently recognised congeners by the shape of the gnathopods and the distinct posterodistal excavation of the first epimeral plates. It is a fairly uncommon species, widely distributed in tropical and temperate regions of the world's oceans. The name *Parapronoe crustulum* has been extensively used, e.g. Shoemaker (1945, p. 246), Reid (1955, p. 24), Hurley (1960, p. 281), Dick (1970, p. 66), Yoo (1971, p. 62), Brusca (1973, p. 19), Thurston (1976, p. 437), Brusca (1981, p. 44), Vinogradov, Volkov & Semenova (1982, p. 371).

8. The rediscovery of syntype material of *Typhis rapax* Milne-Edwards, 1830 and my examination of it, confirming it to be conspecific with *Parapronoe crustulum* Claus, 1879, leads to the possibility of replacing the specific name of *crustulum* with *rapax* as the senior synonym. However, the name *rapax* has been incorrectly used as a senior synonym of *Hemityphis tenuimanus*, which belongs to a quite different family. Adoption of the earlier name for *P. crustulum* would therefore cause unnecessary confusion in the literature and I propose that it be suppressed. The valid name of the species generally known as *Hemityphis rapax* since 1925 (see para. 5 above) is *H. tenuimanus* Claus, 1879.

9. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the specific name *rapax* Milne-Edwards, 1830, as published in the binomen *Typhis rapax*, for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;

(2) to place on the Official List of Specific Names in Zoology the name *crustulum* Claus, 1879, as published in the binomen *Parapronoe crustulum*;

(3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *rapax* Milne-Edwards, 1830, as published in the binomen *Typhis rapax* and as suppressed in (1) above.

**Acknowledgements**

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## Case 3003

# *Meristella* Hall, 1859 (Brachiopoda): proposed designation of *Atrypa laevis* Vanuxem, 1842 as the type species

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**Abstract.** The purpose of this application is to conserve the Lower Devonian brachiopod name *Meristella* Hall, 1859 in its accustomed usage. Hall included only one species, *Atrypa naviformis* Hall, 1843, which was therefore the type species by monotypy. However, *A. naviformis* is poorly known and seldom cited. The designation by Miller (1889) of *Atrypa laevis* Vanuxem, 1842 as type species is almost universally accepted and should be validated.

**Keywords.** Nomenclature; taxonomy; Brachiopoda; Lower Devonian; *Meristella*; *Meristella laevis*.

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1. The name *Meristella* was first used by Hall (1859, p. 78) in the 12th Annual Report of the Regents of the University of the State of New York. Hall listed a number of species giving both their original name and the current name. The name *Atrypa naviformis* Hall, 1843 (p. 72) was changed to '*Merista*? *naviformis*', with a footnote which reads: 'This species, and some others of the Clinton and Niagara groups, differ somewhat from true *Meristae*; and should these differences prove of generic importance, I propose for them the name *Meristella*'. Under Article 15 of the Code, the conditional nature of this proposal does not prevent availability. *Atrypa naviformis* was the only species named with reference to *Meristella* and is therefore its type species by monotypy.

2. A year later Hall (1860, p. 74) published a detailed description of *Meristella* with the suffix (n.g.), adding that the name was 'proposed by me last year'. He (p. 75) included as examples '*Meristella laevis*, *M. bella* and *M. arcuata* of the Lower Helderberg group; *M. cylindrica* and *M. oblata* of the Niagara and Clinton groups'. He did not refer to *M. naviformis*.

3. Davidson (1882, p. 83) gave *Meristella arcuata* (Hall) as type species of *Meristella*, and this was also accepted as the type by Schuchert (1897, p. 266).

4. Miller (1889, p. 354) ignored Davidson's paper and gave *Atrypa laevis* Vanuxem, 1842 (p. 120) as the type species of *Meristella*. He did not include *Atrypa naviformis* amongst the 20 species he included in *Meristella*, instead placing it in *Athyris* McCoy, 1844. Miller's designation of *Atrypa laevis* Vanuxem as type species of *Meristella* was accepted by Hall & Clarke (1893, p. 75) who discussed in detail the characteristics of the various species assigned by Hall to the genus in previous papers, stressing the inadequacy of using *A. naviformis* as type and the appropriateness of using *A. laevis* instead.

5. *Atrypa laevis* was adopted as type species of *Meristella* in the first edition of the *Treatise on Invertebrate Paleontology* by Boucot, Johnson & Staton (1965, p. H656),

and is taken as such by virtually all recent authors (e.g. Havlícek, 1956, p. 78; Savage, 1971, p. 413; Nikiforova, Modzalevskaia & Bassett, 1985, p. 53; a further 9 references using the same type species by a further 16 authors in the last 50 years are held by the Commission Secretariat). It is intended to give *A. laevis* as the type species of *Meristella* in the forthcoming second edition of the *Treatise*.

6. To maintain the widely accepted concept of *Meristella* I propose that *Atrypa laevis* Vanuxem, 1842 be accepted as its type species.

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to set aside all fixations of type species for the nominal genus *Meristella* Hall, 1859 prior to that by Miller (1889) of *Atrypa laevis* Vanuxem, 1842;

(2) to place on the Official List of Generic Names in Zoology the name *Meristella* Hall, 1859 (gender: feminine), type species by subsequent designation by Miller (1889) *Atrypa laevis* Vanuxem, 1842;

(3) to place on the Official List of Specific Names in Zoology the name *laevis* Vanuxem, 1842, as published in the binomen *Atrypa laevis* (specific name of the type species of *Meristella* Hall, 1859).

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## Case 2960

## *Hemidactylus garnotii* Duméril & Bibron, 1836 (Reptilia, Squamata): proposed conservation of the specific name

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**Abstract.** The purpose of this application is to conserve the widely used specific name of *Hemidactylus garnotii* Duméril & Bibron, 1836 for an all-female triploid species of gecko widespread from India to northern Australia and Polynesia, which has also been introduced into Florida and the Bahama Islands. The name is threatened by the long enigmatic but now assured senior subjective synonym *H. peruvianus* Wiegmann, 1835.

**Keywords.** Nomenclature; taxonomy; Reptilia; GEKKONIDAE; gecko; *Hemidactylus garnotii*.

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1. Wiegmann (1835, p. 240) described the new gecko species *Hemidactylus peruvianus* on the basis of a single female specimen (catalogue no. ZMB 395 in the Museum für Naturkunde der Humboldt-Universität zu Berlin) ostensibly from near Tacna, Peru. Although listed as a valid name, even as recently as 1970, the species remained enigmatic because it was 'never found again, at the type-locality or elsewhere' (see Peters & Donoso-Barros, 1970, p. 142).

2. In 1969, however, Kluge & Eckardt (1969, pp. 658–659) reported their discovery that Wiegmann's holotype of *Hemidactylus peruvianus* represented a species generally known since 1836 (Duméril & Bibron, 1836, p. 368) as *Hemidactylus garnotii*. The synonymy was reiterated in two more recent monographs by Kluge (1991, 1993). Although widely distributed (India, southeast Asia, the Philippines, through Indonesia to northern Australia and Polynesia), there are no confirmed records of the species for the Western Hemisphere, except for recent introductions into Florida and

the Bahama Islands. The holotype of *H. peruvianus* presumably has erroneous locality data and was collected elsewhere on F.J.F. Meyen's trip around the world (see Kluge & Eckardt, 1969, p. 659).

3. Duméril & Bibron (1836, p. 369) recorded that *Hemidactylus garnotii* was based on two specimens collected by Garnot and Lesson from 'l'île de Taïti' (Tahiti). The syntypes are numbered MNHN 2318 and 2318A in the Muséum National d'Histoire Naturelle, Paris (see Bauer & Henle, 1994, p. 123). Duméril & Bibron (pp. 369–370) also included *H. peruvianus* in their work, noting that they had reproduced [in French] Wiegmann's description of Meyen's specimen 'n'ayant pas encore eu l'occasion d'observer aucun échantillon appartenant à cette espèce'.

4. The specific name of *Hemidactylus garnotii* Duméril & Bibron, 1836 is a junior subjective synonym of *H. peruvianus* Wiegmann, 1835 but Kluge & Eckardt (1969, p. 659) properly concluded that 'it is in the best interest of nomenclatural stability to continue to use the most often cited *garnotii* rather than the little known name *peruvianus* which predates it'. Bauer & Günther (1991, p. 289) agreed in their listing of types in the Berlin Museum.

5. However, as long as the name *H. peruvianus* remains ostensibly valid it could be revived by any worker rigidly applying the Principle of Priority (Article 23a of the Code). Article 23b makes it clear that if application of that Principle in any given case disturbs stability, existing usage should be maintained and the case submitted to the Commission for a ruling.

6. The specific name of *Hemidactylus garnotii* has been consistently used for this species of gecko for over 150 years, whereas *H. peruvianus* was never properly applied until 1969, when Kluge & Eckardt discovered its identity, and the name has never been used as valid for the species to which it actually applies. The exhaustive synonymy for *H. garnotii* in Bauer & Henle (1994, pp. 123–125) cites 83 usages of the species-group name from 1843–1991, in different works by at least 70 authors. Not since 1934 has any other name been used for the species, during which time *H. peruvianus* was used twice without knowledge of the species to which it applies. The case for the conservation of the name *garnotii* clearly meets the prima facie criteria of Article 79c for the conservation of a long-used junior synonym threatened by an unused senior synonym.

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the specific name *peruvianus* Wiegmann, 1835, as published in the binomen *Hemidactylus peruvianus*, for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;

(2) to place on the Official List of Specific Names in Zoology the name *garnotii* Duméril & Bibron, 1836, as published in the binomen *Hemidactylus garnotii*;

(3) to place on the Official Index of Rejected and Invalid Names in Zoology the name *peruvianus* Wiegmann, 1835, as published in the binomen *Hemidactylus peruvianus* and as suppressed in (1) above.

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## Case 2969

# *Bombycilla cedrorum* Vieillot, [1808] and *Troglodytes aedon* Vieillot, [1809] (Aves, Passeriformes): proposed conservation of the specific names

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**Abstract.** The purpose of this application is to conserve the specific names of *Bombycilla cedrorum* Vieillot, [1808] for the cedar waxwing (family BOMBYCILLIDAE) and of *Troglodytes aedon* Vieillot, [1809] for the North American house wren (family TROGLODYTIDAE). The names are threatened by the little used senior subjective synonyms *Ampelis americana* and *Sylvia domestica* respectively, both of Wilson (1808).

**Keywords.** Nomenclature; taxonomy; Aves; cedar waxwing; North American house wren; *Bombycilla cedrorum*; *Troglodytes aedon*.

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1. Wilson (1808, p. 107, pl. 7, fig. 1) described, illustrated and named the cedar waxwing as *Ampelis americana* and (p. 129, pl. 8, fig. 3) the North American house wren as *Sylvia domestica*. He gave the locality of *A. americana* as Philadelphia and other parts of Pennsylvania and Canada, and noted that it was 'also found as far south as Mexico'. (The bird breeds in the northern United States and subarctic Canada and winters from southern Canada to the Greater Antilles and northern South America). The locality of *S. domestica* was given as Pennsylvania. Hellmayr (1935, p. 104) gave the type locality of *A. americana* as Pennsylvania, and Oberholser (1934, p. 87) gave that of *S. domestica* as Philadelphia.

2. Vieillot ([1808], p. 88, pl. 57) described, illustrated and named the cedar waxwing as the new genus and species *Bombycilla cedrorum*, and gave the locality as 'en Amérique depuis le Canada jusqu'au Mexique'. The type locality was equated to eastern North America by the American Ornithologists' Union (A.O.U.) (1931, p. 270) and was further restricted to Pennsylvania by Burleigh (1963, p. 178). Vieillot ([1809], p. 52, pl. 107) also described, illustrated and named the North American house wren as *Troglodytes aedon*. No locality was given. The type locality was given as northeastern North America by Oberholser (1904, p. 201), who later restricted it to New York City (Oberholser, 1934, p. 87). Vieillot ([1809]) included two nominal species (*aedon* and *arundinaceus*) in his new genus *Troglodytes*; Baird (1858, p. 366) designated *aedon* as the type species.

3. The specific name of *Ampelis americana* Wilson was listed as a junior synonym of *Bombycilla cedrorum* Vieillot in standard synonymies (see, for example, Ridgway, 1904, p. 112; Hellmayr, 1935, p. 104) because the latter name was considered to have priority over *americana*. The date of publication of the name *cedrorum* was given by several early authors (for example, A.O.U., 1895, p. 260; Ridgway, 1904, p. 111) as

1807, the date on the title page of vol. 1 of Vieillot's *Histoire naturelle des oiseaux de l'Amerique septentrionale*. Similarly, the date of publication of the name *Troglodytes aedon* Vieillot was believed by Oberholser (1904) and others to be 1807.

4. The date of the part of Vieillot's publication that contained *Bombycilla cedrorum* has been shown to be September 1808 (see, for example, Hellmayr, 1935, p. 104 and Browning & Monroe, 1991, p. 396). Since the precise date in the month is unknown it must be taken as 30 September (Article 21c of the Code). Volume 1 of Wilson's *American Ornithology*, which included *Ampelis americana*, was published before 21 September 1808 (see Faxon, 1901, p. 216; Hunter, 1983). The specific name of *americana* has had very limited usage (see references in Ridgway, 1904, p. 112) and is not in current use. The description and illustration of *americana* Wilson cannot be identified with either the northern or western subspecies of *B. cedrorum*. The name *B. cedrorum* Vieillot, [1808] has been universally used in recent publications (see, for example, Greenway, 1960, p. 371; A.O.U., 1983, p. 581; Godfrey, 1986, p. 440; Sibley & Monroe, 1990, p. 506). We propose that the usage of Vieillot's name *cedrorum* be maintained by the suppression of *americana* Wilson.

5. The name *Troglodytes domesticus* (Wilson, 1808) was listed as a synonym of *T. aedon* Vieillot, '1807' by Ridgway (1904, p. 581), Oberholser (1904, p. 201) and Hellmayr (1934, p. 217), who all believed the name *aedon* to have priority (para. 3 above). Subsequently Oberholser (1934) pointed out that the name *domestica* has priority over *aedon* because Wilson's *American ornithology* was issued in 1808 but the part of Vieillot's *Histoire naturelle des oiseaux de l'Amerique septentrionale* that contained *T. aedon* was not issued until May 1809. Oberholser (1974, pp. 992 993) restated these dates and the priority of *domestica*. Browning and Monroe (1991, p. 396) confirmed the priority of *domestica*.

6. Phillips (1962, p. 345) and Phillips, Marshall & Monson (1964, p. 117) used the name *Troglodytes aedon*, but later Monson & Phillips (1981, p. 126) and Phillips (1986, p. 141) adopted *T. domesticus* for the same species. In contrast, however, the name *Troglodytes domesticus* was used by Oberholser (1934; 1974, pp. 631, 992 993), Aldrich & Bole (1937, p. 113), Sutton & Burleigh (1940, p. 240), Huey (1942, p. 368), Sutton & Pettingill (1943, p. 283), Brandt (1951, p. 677) and Rea (1983, p. 205), some of whom (Aldrich, in Jewett, Taylor, Shaw & Aldrich, 1953, p. 495; Burleigh, 1958, p. 422; 1972, p. 269; Sutton, 1967, p. 406) subsequently adopted *T. aedon* for the taxon. Virtually every major taxonomic compilation has continued the use of *aedon*, including (but not limited to) A.O.U. (1957, p. 406; 1983, p. 531), Miller, Friedmann, Griscom & Moore (1957, p. 161), Paynter (1960, p. 422), Wolters (1980, p. 432), Godfrey (1986, p. 410) and Sibley & Monroe (1990, p. 562). Likewise, dozens of studies of behavior, ecology and physiology by Kendeigh (see, for example, Kendeigh, 1952) and his students, and virtually every other non-taxonomic compilation, have continued the use of *T. aedon* for the species, one of the most well studied birds of North America. We propose that the specific name *domestica* Wilson, 1808 be suppressed to allow the maintenance of the current usage of *T. aedon* Vieillot, [1809].

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the following specific names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:

(a) *americana* Wilson, 1808, as published in the binomen *Ampelis americana*;
(b) *domestica* Wilson, 1808, as published in the binomen *Sylvia domestica*;

(2) to place on the Official List of Generic Names in Zoology the following names:
(a) *Bombycilla* Vieillot, [1808] (gender: feminine), type species by monotypy *Bombycilla cedrorum* Vieillot, [1808];
(b) *Troglodytes* Vieillot, [1809] (gender: masculine), type species by subsequent designation by Baird (1858) *Troglodytes aedon* Vieillot, [1809];

(3) to place on the Official List of Specific Names in Zoology the following names:
(a) *cedrorum* Vieillot, [1808], as published in the binomen *Bombycilla cedrorum* (specific name of the type species of *Bombycilla* Vieillot, [1808]);
(b) *aedon* Vieillot, [1809], as published in the binomen *Troglodytes aedon* (specific name of the type species of *Troglodytes* Vieillot, [1809]);

(4) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the following names:
(a) *americana* Wilson, 1808, as published in the binomen *Ampelis americana* and as suppressed in (1)(a) above;
(b) *domestica* Wilson, 1808, as published in the binomen *Sylvia domestica* and as suppressed in (1)(b) above.

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**Comment on the proposed conservation of the specific names of *Aphodius rufus* (Moll, 1782), *A. foetidus* (Herbst, 1783) and *Aegialia rufa* (Fabricius, 1792) (Insecta, Coleoptera)**
(Case 2878; see BZN **51**: 121–127, 340–341; **52**: 71–73, 123–125)

David Král

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I am in complete agreement with the application by Krell, Stebnicka & Holm. The authors have clearly and correctly presented the facts concerning this difficult problem and they have put forward the solution which serves stability in zoological nomenclature.

At least two of the species discussed, *Aphodius rufus* (Moll, 1782) and *A. foetidus* (Herbst, 1783), are widespread in almost the whole of Europe and adjacent parts of Asia and their names appear not just in taxonomic studies, but with increasing frequency, in ecological studies, local faunal lists, red data books, and the like.

I have given the Commission Secretariat a list of 10 additional references in which all the names are used, but I can supply 30 further citations if requested.

Alternative solutions mentioned, for example that in Dellacasa's second alternative (BZN **51**: 340–341), even though perhaps formally correct, have been used only sporadically.

**Comments on the proposed conservation of some mammal generic names first published in Brisson's (1762) *Regnum Animale***
(Case 2928; see BZN **51**: 135–146, 266–267, 342–348; **52**: 78–93, 187–192, 271–275, 347–350)

(1) Hugh H. Kolb

*3 High Brae, Torphichen, West Lothian, Scotland EH48 4LX, U.K.* (formerly of the *Scottish Agricultural Science Agency, Edinburgh EH12 8NJ, Scotland*)

I fully agree with the application to conserve 11 of Brisson's (1762) generic names for mammals and am happy to support it.

I note that the application (para. 5, BZN **51**: 138) seeks the conservation of the name *Cuniculus* Brisson, 1762 for the South American pacas and that, if the proposal is not approved by the Commission, *Cuniculus* Brisson would be unavailable and the junior homonym *Cuniculus* Meyer, 1790 would become a valid name. Meyer's name relates to the European rabbit and would replace the well-known and universally used, but junior, name *Oryctolagus* Lilljeborg, 1874.

I worked on the rabbit for some years and have supplied the Commission Secretariat with a representative list of 11 papers (1985-1994) which demonstrate the usage of the name *Oryctolagus*. I am fully in agreement with maintaining the generic name *Oryctolagus* and would oppose any move to replace it with *Cuniculus*.

When there are no proposed changes in the taxonomic relationships of species, elevating precedence over usage in the choice of a name serves no purpose and merely causes confusion; this is especially acute if a name (in this instance *Cuniculus*) switches meaning.

(2) Peter Lüps

*Naturhistorisches Museum, Bernastrasse 15, CH-3005 Bern, Switzerland*

The spare time that I can devote to research on the Eurasian badger, *Meles meles*, is concentated on morphology and ecology. I have little or no experience in taxonomy. I do not see any reason to change the authorship of the generic name for this taxon and I therefore support the proposal to keep *Meles* Brisson, 1762.

**Comments on the proposed conservation of usage of 15 mammal specific names based on wild species which are antedated by or contemporary with those based on domestic animals**
(Case 3010; see BZN **53**: 28–37, 125)

(1) D.W. Yalden

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I write as the Managing Editor of *Mammal Review*. I must congratulate Anthea Gentry, Juliet Clutton-Brock and Colin Groves on a remarkably sensible and well argued case. The specific names discussed were, in most cases, intended to contrast the domestic animal with the wild one, or were coined to distinguish the wild animal from its previously known domestic relative. To attempt now to claim that the specific name of the domestic form is the correct name for its wild relative also is totally confusing, totally destabilising, and totally unhelpful. The contrast between *Canis lupus* and *C. familiaris* is well understood in popular as well as scientific writing, and in archaeological as well as zoological literature. The same contrast is equally clear when *Ovis orientalis* and *O. aries* are used. Using *aries* to include *orientalis* is undermining the well accepted nomenclature of the wild species, and I thoroughly deplore it.

I am enough of an archaeologist to understand the very real problem raised by the nomenclature of domestic animals, and can appreciate the difficulties that various attempts to derive a generally acceptable terminology have created. These difficulties in no way justify upsetting the one established and stable part of this problem (the names for the wild taxa), and certainly not doing so in a manner that will cause the maximum confusion.

I wish to support the very sensible proposal unreservedly in an attempt to maintain stability and clarity.

I trust that these authors or other interested parties will produce an attempt to stabilise the nomenclature of domestic animals in a similarly sane way, in the future and in a separate application, once this one has been settled.

(2) Gordon B. Corbet
*Little Dumbarnie, Upper Largo, Leven, Fife KY8 6JQ, Scotland, U.K.*

I strongly support this application. Previous attempts to remove ambiguity in the use of names for domestic forms and their wild ancestors by the adoption of general rules, as documented in this case, have failed both to effect modification of the Code and to prevent the continuing use of inconsistent practices and ambiguous names in influential works such as that of Wilson & Reeder (1993). Implementation of this proposal will stabilize the names of the wild species, while allowing freedom of taxonomic judgement as to what degree of domestication can be encompassed in the species-concept employed. This is particularly important in many archaeozoological studies where the ancestral wild species is usually not in doubt while the evidence of domestication is debatable.

(3) László Bartosiewicz
*Institute of Archaeological Sciences, Loránd Eötvös University, Múzeum körút 4/b, H-1088 Budapest, Hungary*

As a zoologist working in both archaeozoology and the research of modern domestic animals I am in favor of retaining the 15 mammal specific names, as proposed by Gentry et al.

Their proposal is based on a convention widely followed in my areas of research. While its more consistent use would be a welcome improvement, I fear that the implementation of radical changes (such as in the 1993 Wilson & Reeder volume) would result in considerable confusion during a prolonged period of transition.

All nomenclatures are prone to change with the development of research. However, clarity and the consistent use of terms is most important. Therefore I support the idea of using traditional nomenclature for wild mammal species and their domestic derivatives which traditionally have separate names.

(4) S.M. Stallibrass
*Department of Archaeology, University of Durham, South Road, Durham DH1 3LE, U.K.*

I have been researching animal bones from archaeological sites for 20 years and agree wholeheartedly with the authors of this application that it is essential that identification makes it clear whether the item concerned derives from a wild or a domestic or an intermediate form. The current variability in nomenclatural systems used and abused by different researchers sometimes makes identifications unclear and this, in turn, renders comparisons and interpretations unfeasible.

I welcome, therefore, the authors's efforts to clarify the situation and feel that the system that they propose, whereby the earliest name for the wild form is adopted even if it post-dates that for a domestic form, is eminently sensible.

Since I do not work with some of the taxa that they consider, I do not feel qualified to comment on the names that they recommend for these, but I do support the names that they suggest for *Equus africanus* (wild ass), *E. ferus* (tarpan), *Bos primigenius* (aurochs), *Capra aegagrus* (bezoar), *Ovis orientalis* (Asian mouflon), *Canis lupus* (wolf), *Mustela putorius* (polecat) and *Felis silvestris* (wildcat).

(5) Achilles Gautier
*Laboratorium voor Paleontologie, Geologisch Instituut, Universiteit Gent, Krijgslaan 281, B-9000 Gent, Belgium*

Approval of the usage of the 15 specific names for wild mammals which are antedated by or contemporary with those based on their domestic relatives may be considered a first step in labelling domestic animals; therefore I am very much in favour of the proposal put forward in Case 3010.

However, I do think that the same treatment should be applied to non-mammalian wild species (*Carassius gibelio* (Bloch, 1782), the Prussian carp, and *Bombyx mandarina* (Moore, 1872), the mulberry silk moth) the domestic forms of which were named before their ancestors. This I consider a more consistent and still less confusing approach; moreover, it may avoid another application in the future.

(6) Andrew Kitchener
*Department of Geology and Zoology, Royal Museum of Scotland, Chambers Street, Edinburgh EH1 1JF, Scotland, U.K.*

I strongly support Gentry et al. in their proposed conservation of the usage of 15 mammal specific names based on wild species. This is not only for practical reasons, but also because domestication as a process should be equated with allopatric speciation.

1. For all but a very few mammalian species (the polar bear, *Ursus maritimus*, for example; see Kurtén, 1964; Taberlet & Bouvet, 1992) when they speciated and which species was ancestral is unknown, even though it may be possible to infer common ancestors from cladistic analyses of morphological and molecular data. Domesticated mammals differ because in most cases an ancestor and the time of earliest domestication can be identified, but because this is mediated by humans and has occurred within the last 12000 years, domestication is regarded as being somehow outside other evolutionary change.

2. Domestication can be regarded as having effects similar to allopatric speciation (see Mayr & Ashlock, 1991). In its strictest definition (see, for example, Clutton-Brock, 1981) domestication results in distinctive morphological, molecular and behavioural changes, which are the result of either selection by humans for particular traits or genetic drift in small isolated founder populations derived from an ancestral wild population. Reproductive isolation is brought about by physical barriers created by humans (fences and cages, for example), whereas allopatric speciation is usually due to some form of geographical barrier. Archaeozoologists are able to distinguish between wild and domesticated species in the archaeological record (see, for example, Davis, 1987). It is, therefore, illogical to give both forms the same scientific name and, under the Code, incorrect to cite the domesticated as a subspecies of the wild form (as in '*Felis silvestris catus*'; see, for example, Kratochvil, 1973; Kerby & Macdonald, 1988).

3. In many cases closely related mammal and bird species do not conform to a strict interpretation of the biological species concept (see, for example, Mayr & Ashlock, 1992) because they are fully interfertile. Hybridisation between closely

related species of many mammals and birds is common (for example, marmosets, *Callithrix* spp., guenons, *Cercopithecus* spp., canids, cervids, caprines, ducks and birds of paradise; see Lernould, 1988; Struhsaker, Butynski & Lwanga, 1988; Coimbra-Filho, Pissinatti & Rylands, 1993; Lever, 1994; Fuller, 1995) in areas of sympatry in the wild, or in captivity, or through inroduction of one species into the range of another. For example, the introduction of sika deer, *Cervus nippon*, to Britain has resulted in extensive introgression with the native red deer, *Cervus elaphus* (see, for example, Lowe & Gardiner, 1975), but these two taxa are still regarded as distinct (although some authors claim that mainland forms of sika are introgressive hybrids). Therefore, interfertility between wild and domesticated species should not be regarded as negating their separate specific status. Application of other species concepts, including that of phylogenetic species, would support raising domesticated taxa to full specific rank (see, for example, Cracraft, 1989).

4. Feralisation and subsequent introgression with the wild ancestral species also does not negate the basic speciation process produced by domestication. For example, feral domestic ferrets, *Mustela furo*, from Shetland retain pelage characters, significantly smaller cranial volumes and other skull characters associated with domestication, despite being feral for many generations (Kitchener et al., in preparation). They have not reverted morphologically or genetically to become like their ancestor, the western polecat, *M. putorius*.

5. Diversification of the domesticated species into a variety of forms which might merit subspecific or even specific status through artificial selection of traits or rare mutant alleles does not invalidate the initial domestication event as a form of speciation.

6. Therefore, in its strictest definition, domestication of a wild species has results similar to allopatric speciation. It follows, therefore, that domesticated forms should be recognised as taxa distinct from their ancestors.

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(7) W.F.H. Ansell

*Trenrine, Zennor, St Ives, Cornwall TR26 3BW, U.K.*

I am in complete agreement with the proposal to conserve the usage of the 15 mammal specific names based on wild species. I adopted this procedure in two of the parts of *The mammals of Africa*, using the names *Bos primigenius* for the aurochs and *Equus africanus* for the wild ass.

**Additional references**

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(8) Augusto Azzaroli

*Museo di Geologia e Paleontologia, Università di Firenze, Via G. La Pira, 4–50121 Firenze, Italy*

I write to express my approval of the proposals made by Gentry et al. on mammalian nomenclature.

Until now I have used the names *Equus caballus* and *E. asinus* but I confess that the application has convinced me to change my attitude. I regret that I did not see the proposals until my last article on American equids was already published. I also have a paper in press on horses from the Forest Bed Formation and do not know if I will be in time to change the nomenclature. I shall be more careful in future.

(9) R.J. Berry

*Department of Biology, University College London, Darwin Building, Gower Street, London WC1E 6BT, U.K.*

I write to support the proposal by Gentry et al. to rationalise and stabilise the specific names of mammals which have domesticated forms. This has become important with the increase in conservation legislation (CITES, and such). The case made by the authors seems wholly sensible, and formalises the practice of most workers.

(10) L.M. Gosling
*Institute of Zoology, The Zoological Society of London, Regent's Park, London NW1 4RY, U.K.*

I write as Director of Science of the Zoological Society to express my strong support for the conservation of the 15 mammal specific names detailed in the application. It is particularly important to distinguish clearly between wild animals and their domestic counterparts to avoid any confusion in species conservation programmes.

(11) Simon Tonge
*London Zoo, Regent's Park, London NW1 4RY, U.K.*

I write as Senior Curator. I support the proposition to conserve the usage of 15 mammal specific names on the grounds that stability in the nomenclature of these mammals should override strict priority.

Stocks of wild animals in zoological gardens are increasingly part of managed in situ conservation programmes. Staff managing these programmes are not necessarily nomenclatural specialists and changes of name cause confusion and uncertainty.

In the 1995 edition of the *Mammal Inventory of the Federation of Zoological Gardens of Great Britain and Ireland* the nomenclature follows Wilson & Reeder (1993) except in the instances of the African wild ass, *Equus africanus*, and Przewalski's wild horse, *E. przewalskii* (sometimes treated as a synonym of *E. ferus*). A decision was made that to follow these authors in their use of *Equus asinus* and *E. caballus* would (a) cause confusion amongst holders of the species, and (b) distract attention from the conservation importance of these taxa which are, respectively, critically endangered and extinct in the wild.

(12) S.K. Eltringham
*Department of Zoology, University of Cambridge, Downing Street, Cambridge CB2 3EJ, U.K.*

I have read the application by Gentry et al. with great interest and consider the proposal to conserve the specific names of wild animals which are distinct from the domestic forms derived from them to be eminently sensible. It would lead to greater stability in nomenclature and reduce confusion, particularly in the conservation of rare breeds of domestic animals whose wild progenitors have lately been given the same scientific name. I very much hope that the Commission will accept the recommendations of the authors.

(13) C.S. Churcher
*RR 1, Site 42, Box 12, Gabriola Island, British Columbia V0R 1X0, Canada*

I am writing in support of the application by Gentry et al.

I have worked with archaeological, palaeontological and neontological taxa and have found the confusion in usage of the names of some mammalian taxa, as set forth in the proposal, and the formats that are applied to many taxa that are domestic, domesticated or commensal, to be a source of argument and dispute. I find these

contentions an unnecessary waste of time and energy and support any move towards simplifying or regularising the situation. Thus I am in full agreement with the proposal in Case 3010.

I retired from the Department of Zoology, University of Toronto, last July and have moved to British Columbia. Thus, I am a professional working as a mammalogist in archaeozoology, mammalogy and palaeontology and consider myself reasonably au fait with the situation and with the intentions of the proposers. I should like to see the proposal adopted.

(14) David L. Harrison & Paul J.J. Bates
*Harrison Zoological Museum, Bowerwood House, St Botolph's Road, Sevenoaks, Kent TN13 3AQ, U.K.*

We are writing to express our strong support for the application.

We believe that the conservation of the 15 mammal specific names is advisable for the following reasons:

(a) Interests of stability. These existing specific names have been in current use for many years.

(b) Ambiguity concerning the biological origin of certain domestic species. The cat, goat, sheep and cattle, for example, may have more than one ancestral species.

(c) Nomenclature. The wild species are better defined, often with type material and precise type localities, and related taxa are better compared in these circumstances.

For these reasons we wish to support the application very strongly.

(15) N. Spassov
*National Museum of Natural History, Bulgarian Academy of Sciences, Blvd. Tzar Osvoboditel 1, Sofia 1000, Bulgaria*

I should like to express my full agreement for the argument and proposal of Gentry et al. to conserve the 15 specific names for mammals based on wild species.

With regard to the wild Holocene European horse, the name *Equus ferus* should be conserved only for the species described by Boddaert (1785) and later by Antonius (1912). This is the horse from the Russian steppes (the tarpan), whose fossils we have found recently, demonstrating its wild nature. Current research seems to show that there is another Late Pleistocene horse which has crossed the Pleistocene/Holocene boundary in East Europe.

(16) T.P. O'Connor
*Department of Archaeological Sciences, University of Bradford, West Yorkshire BD7 1DP, U.K.*

I write with reference to Case 3010 to urge that the proposed conservation of 15 mammal specific names based on wild species be accepted.

The authors have set out most clearly the difficulties and differences of view that have surrounded the nomenclature of domesticated animals, and it is clear that this

debate has some way to run. Wilson & Reeder (1993) have unhelpfully introduced an alternative nomenclature for the wild species, the only merit of which is its rigid adherence to rules of priority, and that only if wild and domestic forms are accepted as conspecific in all cases. As the specific status of domesticated forms is still not the subject of a consensus view, it makes little sense to use Linnaeus's (1758, 1766) names for domesticated forms to refer to individuals in wild populations. The fact that CITES and other legislative organisations have adopted the first available name based on wild species is also important. It would be irresponsible to compromise the protection of endangered species simply in order to follow a rather questionable interpretation of the rules of priority.

(17) Arturo Morales Muñiz

*Laboratorio de Arqueozoología, Departamento de Biología, Universidad Autónoma de Madrid, E-28049 Madrid, Spain*

Ever since I joined the archaeozoological community, back in 1976, a dispute on how to name domestic animals has been going on around me. Although the tempo of the debate slowed down during the past decade, in the first half of the present one it has gone up again (see the list of references in the application).

In the early years I was not at all concerned with the issue, which struck me as an empty, formal discussion devoid of any practical value. Over the years, however, my views on this problem have gradually changed, so that at present I appreciate the issue in a completely different way. Thus, for example, to stress one line of argument, I fully subscribe to Gentry et al.'s claim that 'The use for wild species of names that were first described on domestic species ... will confuse ... customs officials who have the job of sorting out illegal imports of endangered species'. This is no trivial issue for many of the surviving progenitors of domestic animals (the bezoar, the Bactrian camel, and others) are in serious danger of extinction, and customs officials '... would find it difficult to impound a trophy head of a wild sheep if it carries the name *Ovis aries*'.

It should be stated that I feel any solution to the problem will be a compromise. The ultimate reason lies in the virtual impossibility of 'straightjacketing' all domestic forms and their ancestors into a formal system of nomenclature. Among other things such systems:

(a) Cannot adequately reflect the whole range of genetic events, including repetitive episodes of backcrossing, raciation and hybridisation which characterise the configuration of domestic stocks to this day (see Gautier, 1990; Wing, 1993).

(b) Have been used by very many authors (even by the same author) in rather inconsistent ways depending on the species involved, the amount of knowledge concerning particular wild species, the philosophy behind their proposals, etc.

Due to these operative and historical factors every attempt to either (i) devise a nomenclatural system for domestic animals independent of that of the wild species (no matter how logical or consistent), or (ii) fully integrate domestic animals and make them conform to the Linnean system, has ended in either rejection or oblivion

or both (Bolken, 1958; Dennler de la Tour, 1959; Groves, 1971; Odening, 1979; Corbet & Clutton-Brock, 1984; Gautier, 1993; and Uerpmann, 1993, as set out in paras. 3–5 of the application).

The eventual compromise must be guided, above all, by practicalities. One of the best ways of being practical in this case is to have the names for wild species intermingling as little as possible with those of domestic forms. (For many species, the rabbit for example, this is impossible because the wild and domestic forms share the same name). From this standpoint, I judge Gentry et al.'s application, which requests the Commission to rule that the names for each of the listed 15 wild species of mammals are not invalid by virtue of being antedated by a name based on a domestic form, to fully conform to the compromise. If only for this reason, therefore, I should like to support their proposal.

In science, as elsewhere, formal issues are extremely important but often dwell in the realm of ideas. In addition to its formal connotations, however, I feel that not only are there sound practical arguments in Gentry et al.'s proposal to the Commission, but also that most of these are of far-reaching consequences as well — a matter of deep concern to all of us.

(18) P.A. Jewell

*Department of Zoology, University of Cambridge, Downing Street, Cambridge CB2 3EJ, U.K.*

I have been dismayed to see that in *Mammal species of the world*, edited by Wilson & Reeder (1993), they have not adopted the specific names that are in common usage for perissodactyls and artiodactyls. Instead, names based on domestic animals have been introduced. I can find no justification for this action.

I have been involved over many years with the problem of how best to assign Latin names to domestic forms and the confusion in that field has gradually been reduced, even if not finally resolved. To use the nomenclature referred to above is a retrograde step. Current practice is sensible in that most authoritative works have adopted the first available name based on the wild species and not an earlier name (often proposed by Linnaeus, 1758, 1766) that was originally proposed on a domestic form.

I would most strongly urge the Commission to conserve the 15 specific names of mammals that are set out in the application by Gentry et al.

(19) Support for the application has also been received from Prof John Skinner (*Mammal Research Institute, University of Pretoria, Pretoria 0002, South Africa*), Prof Louis Chaix (*Département d'archéozoologie, Muséum d'histoire naturelle, Route de Malagnou 1, Case Postale 6434, CH-1211, Genève 6, Switzerland*), Dr Elizabeth Iregren (*Department of Historical Osteology, Institute of Archaeology, Lund University, Sandgatan 1, S-223 50 Lund, Sweden*), Dr Peter Andrews (*Department of Palaeontology, The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.*) and Miss Paulina D. Jenkins (*Department of Zoology, The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.*).

# OPINION 1843

## *Stictostroma* Parks, 1936 (Porifera, Stromatoporoidea): conserved, and *Stictostroma gorriense* Stearn, 1995 designated as the type species

**Keywords.** Nomenclature; taxonomy; Stromatoporoidea; Devonian; *Stictostroma*; *Stictostroma gorriense*.

**Ruling**

(1) Under the plenary powers:
  (a) it is hereby ruled that the generic name *Stictostroma* Parks, 1936 is available despite the lack of a validly fixed type species at the time of publication;
  (b) all previous fixations of type species for the nominal genus *Stictostroma* Parks, 1936 are hereby set aside and *Stictostroma gorriense* Stearn, 1995 is designated as the type species.

(2) The name *Stictostroma* Parks, 1936 (gender: neuter), type species by designation under the plenary powers in (1)(b) above *Stictostroma gorriense* Stearn, 1995, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *gorriense* Stearn, 1995, as published in the binomen *Stictostroma gorriense* (specific name of the type species of *Stictostroma* Parks, 1936), is hereby placed on the Official List of Specific Names in Zoology.

**History of Case 2901**

An application for the conservation of the generic name *Stictostroma* Parks, 1936, and the designation of *Stictostroma gorriense* Stearn, 1995 as the type species, was received from Prof Colin W. Stearn (*Earth and Planetary Sciences, McGill University, Montreal, Quebec, Canada*) on 14 July 1993. After correspondence and the publication of Stearn (1995) the case was published in BZN **52**: 18–20 (March 1995). Notice of the case was sent to appropriate journals.

A comment from Dr Philippe Bouchet (*Muséum national d'Histoire naturelle, Paris, France*), published in BZN **52**: 259 (September 1995), supported the proposal (para. 8, item (1)(b)) to designate *Stictostroma gorriense* Stearn, 1995 as the type species of *Stictostroma*, but suggested atttribution of the name *Stictostroma* to Galloway & St Jean (1957) rather than to Parks (1936).

A comment in support of the application from Prof Joseph St Jean (*University of North Carolina, North Carolina, U.S.A.*), also published in BZN **52**: 259, noted that Parkes (1936) had used the holotype of *S. gorriense* when proposing *Stictostroma*.

It was noted on the voting paper that a comment received from Prof C.W. Stearn, the author of the application, stated: 'I reply to Dr Bouchet's comment on the validity of the name *Stictostroma*. What I wrote in my application is supported by St Jean's comment. Although Bouchet's point is a valid one and under the Code *Stictostroma* should be attributed to Galloway & St Jean, the point of my application was not only to clear up the identity of the type species but to request the Commission to validate usage of the last 60 years, including that by Galloway & St Jean themselves, and give credit to Parks who first realized the usefulness of this taxon. The Commission will have to decide this matter and I hope will do so on the

basis that future taxonomists will be better guided through the nomenclatural complexities by recognition of Parks as the author'.

**Decision of the Commission**

On 1 March 1996 the members of the Commission were invited to vote on the proposals published in BZN **52**: 19–20. At the close of the voting period on 1 June 1996 the votes were as follows:

Affirmative votes — 21: Bayer, Bock, Bouchet (part), Cocks, Corliss, Dupuis, Hahn, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza (part), Minelli (part), Nielsen, Nye, Schuster, Starobogatov, Trjapitzin

Negative votes — 2: Savage and Štys.

No vote was received from Halvorsen.

Cogger and Ride were on leave of absence.

Bouchet, Martins de Souza and Minelli voted for the designation of *Stictostroma gorriense* Stearn, 1995 as the type species of *Stictostroma*, but against attributing the name to Parks (1936).

**Original references**

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

*Stictostroma* Parks, 1936, *University of Toronto Studies*, Geological Series, **39**: 77.

*gorriense*, *Stictostroma*, Stearn, 1995, *Journal of Paleontology*, **69**: 26.

# OPINION 1844

## *Aplysia juliana* Quoy & Gaimard, 1832 (Mollusca, Gastropoda): specific name conserved

**Keywords.** Nomenclature; taxonomy; Gastropoda; sea hares; *Aplysia juliana*.

**Ruling**

(1) Under the plenary powers the specific name *sorex* Rang, 1828, as published in the binomen *Aplysia sorex*, is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.

(2) The name *juliana* Quoy & Gaimard, 1832, as published in the binomen *Aplysia juliana*, is hereby placed on the Official List of Specific Names in Zoology.

(3) The name *sorex* Rang, 1828, as published in the binomen *Aplysia sorex* and as suppressed in (1) above, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology.

**History of Case 2949**

An application for the conservation of the specific name of *Aplysia juliana* Quoy & Gaimard, 1832 was received from Drs E. Martínez and J. Ortea (*Departamento de Biología de Organismos y Sistemas, C/ Catedrático Rodrigo Uría s/n, Oviedo, Asturias, Spain*) on 6 September 1994. After correspondence the case was published in BZN **52**: 21–23 (March 1995). Notice of the case was sent to appropriate journals.

A comment in support from Dr Alan Bebbington (*Uley, near Dursley, Gloucestershire, U.K.*) was published in BZN **52**: 260–261 (September 1995).

**Decision of the Commission**

On 1 March 1996 the members of the Commission were invited to vote on the proposals published in BZN **52**: 22–23. At the close of the voting period on 1 June 1996 the votes were as follows:

Affirmative votes — 22: Bayer, Bock, Bouchet, Cocks, Corliss, Hahn, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Trjapitzin

Negative votes — none.

Dupuis abstained.

No vote was received from Halvorsen.

Cogger and Ride were on leave of absence.

**Original references**

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

*juliana*, *Aplysia*, Quoy & Gaimard, 1832, Zoologie. *In*: *Voyage de découvertes de* L'Astrolabe *pendant les années 1826-1827 1828-1829 sous le commandement de M. J. Dumont d'Urville*, vol. 2 (Mollusques), p. 309.

*sorex*, *Aplysia*, Rang, 1828, *Histoire naturelle des Aplysiens, première famille de l'ordre des Tectibranches*, p. 57.

# OPINION 1845

## *Tropidoptera* Ancey, 1889 (Mollusca, Gastropoda): *Endodonta wesleyi* Sykes, 1896 designated as the type species

**Keywords.** Nomenclature; taxonomy; Gastropoda; *Tropidoptera*; *Tropidoptera wesleyi*; Hawaii.

**Ruling**

(1) Under the plenary powers all previous fixations of type species for the nominal genus *Tropidoptera* Ancey, 1889 are hereby set aside and *Endodonta* (*Pterodiscus*) *wesleyi* Sykes, 1896 is designated as the type species.

(2) The name *Tropidoptera* Ancey, 1889 (gender: feminine), type species by designation under the plenary powers in (1) above *Endodonta wesleyi* Sykes, 1896, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *wesleyi* Sykes, 1896, as published in the binomen *Endodonta* (*Pterodiscus*) *wesleyi* (specific name of the type species of *Tropidoptera* Ancey, 1889), is hereby placed on the Official List of Specific Names in Zoology.

(4) The name *Pterodiscus* Pilsbry, 1893 is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology (a junior objective synonym of *Tropidoptera* Ancey, 1889).

**History of Case 2903**

An application for the designation of *Endodonta* (*Pterodiscus*) *wesleyi* Sykes, 1896 as the type species of *Tropidoptera* Ancey, 1889 was received from Drs Neal L. Evenhuis and Robert H. Cowie (*Bishop Museum, Honolulu, Hawaii, U.S.A.*) on 17 September 1993. After correspondence the case was published in BZN **52**: 148–149 (June 1995). Notice of the case was sent to appropriate journals.

**Decision of the Commission**

On 1 March 1996 the members of the Commission were invited to vote on the proposals published in BZN **52**: 149. At the close of the voting period on 1 June 1996 the votes were as follows:

Affirmative votes — 22: Bayer, Bock, Bouchet, Cocks, Corliss, Hahn, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Trjapitzin

Negative votes — none.

Dupuis abstained.

No vote was received from Halvorsen.

Cogger and Ride were on leave of absence.

**Original references**

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

*Pterodiscus* Pilsbry, 1893, Part 33, pp. 1–48 *in*: *Manual of Conchology. Structural and systematic. With illustrations of the species. Founded by George W. Tryon, Jr. Second series: Pulmonata*, vol. 9, p. 36.

*Tropidoptera* Ancey, 1889, *Bulletin de la Société Malacologique de France*, **6**: 191.

*wesleyi*, *Endodonta* (*Pterodiscus*), Sykes, 1896, *Proceedings of the Malacological Society of London*, **2**(3): 127.

# OPINION 1846

## *Eophacops* Delo, 1935 and *Acernaspis* Campbell, 1967 (Trilobita): conserved

**Keywords.** Nomenclature; taxonomy; Trilobita; Silurian; *Acernaspis*; *Eophacops*.

**Ruling**

(1) Under the plenary powers the generic name *Pterygometopidella* Wedekind, 1912 is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:
   (a) *Eophacops* Delo, 1935 (gender: masculine), type species by monotypy *Phacops handwerki* Weller, 1907;
   (b) *Acernaspis* Campbell, 1967 (gender: feminine), type species by monotypy *Phacops orestes* Billings, 1860.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:
   (a) *handwerki* Weller, 1907, as published in the binomen *Phacops handwerki* (specific name of the type species of *Eophacops* Delo, 1935);
   (b) *orestes* Billings, 1860, as published in the binomen *Phacops orestes* (specific name of the type species of *Acernaspis* Campbell, 1967).

(4) The name *Pterygometopidella* Wedekind, 1912 is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology, as suppressed in (1) above.

**History of Case 2944**

An application for the conservation of the generic names *Eophacops* Delo, 1935 and *Acernaspis* Campbell, 1967 was received from Drs R.M. Owens (*National Museum of Wales, Cardiff, Wales, U.K.*) and A.T. Thomas (*University of Birmingham, Edgbaston, Birmingham, U.K.*) on 18 July 1994. After correspondence the case was published in BZN **52**: 34–36 (March 1995). Notice of the case was sent to appropriate journals.

A comment in support from Prof H.B. Whittington (*University of Cambridge, Cambridge, U.K.*) was published in BZN **52**: 262 (September 1995).

**Decision of the Commission**

On 1 March 1996 the members of the Commission were invited to vote on the proposals published in BZN **52**: 35 36. At the close of the voting period on 1 June 1996 the votes were as follows:

Affirmative votes — 22: Bayer, Bock, Cocks, Corliss, Dupuis, Hahn, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Trjapitzin

Negative votes — 1: Bouchet.

No vote was received from Halvorsen.

Cogger and Ride were on leave of absence.

Bouchet commented: 'The authors of the application have failed to demonstrate that the names *Eophacops* Delo, 1935 and *Acernaspis* Campbell, 1967 are used other than in a very small segment of the paleontological literature, apparently all of it dealing with systematics. Priority should apply; I vote against the suppression of *Pterygometopidella* Wedekind, 1912'.

## Original references

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

*Acernaspis* Campbell, 1967, *Bulletin, Oklahoma Geological Survey*, **115**: 32.

*Eophacops* Delo, 1935, *Journal of Paleontology*, **9**: 405.

*handwerki*, *Phacops*, Weller, 1907, *Bulletin, Chicago Academy of Science* (*The Natural History Survey*), **4**: 271.

*orestes*, *Phacops*, Billings, 1860, *Canadian Naturalist and Geologist*, **5**: 65.

*Pterygometopidella* Wedekind, 1912, *Zeitschrift der Deutschen Geologischen Gesellschaft* (*Abhandlungen und Monatsberichte*), **63** (for 1911): 324.

# OPINION 1847

## *Diplocentrus mexicanus* Peters, 1861 (Arachnida, Scorpiones): rediscovered holotype confirmed as the name-bearing type

**Keywords.** Nomenclature; taxonomy; Arachnida; Scorpiones; scorpions; *Diplocentrus mexicanus*; Mexico.

**Ruling**

(1) The name-bearing type for *Diplocentrus mexicanus* Peters, 1861 is hereby confirmed as the rediscovered holotype.

(2) The name *Diplocentrus* Peters, 1861 (gender: masculine), type species by monotypy *Diplocentrus mexicanus* Peters, 1861, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *mexicanus* Peters, 1861, as published in the binomen *Diplocentrus mexicanus* (specific name of the type species of *Diplocentrus* Peters, 1861) and as defined by the holotype (female specimen no. ZMB 74 in the Zoologisches Museum, Humboldt-Universität zu Berlin), confirmed in (1) above, is hereby placed on the Official List of Specific Names in Zoology.

**History of Case 2914**

An application for the rediscovered holotype to be confirmed as the name-bearing type of *Diplocentrus mexicanus* Peters, 1861 was received from Dr W. David Sissom (*West Texas A & M University, Canyon, Texas, U.S.A.*) on 22 November 1993. After correspondence the case was published in BZN **52**: 37–39 (March 1995). Notice of the case was sent to appropriate journals.

**Decision of the Commission**

On 1 March 1996 the members of the Commission were invited to vote on the proposals published in BZN **52**: 38. At the close of the voting period on 1 June 1996 the votes were as follows:

Affirmative votes — 23: Bayer, Bock, Bouchet, Cocks, Corliss, Dupuis, Hahn, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Trjapitzin

Negative votes — none.

No vote was received from Halvorsen.

Cogger and Ride were on leave of absence.

**Original references**

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

*Diplocentrus* Peters, 1861, *Monatsberichte der Königlichen Preussischen Akademie der Wissenschaften zu Berlin*, **1861**: 512.

*mexicanus*, *Diplocentrus*, Peters, 1861, *Monatsberichte der Königlichen Preussischen Akademie der Wissenschaften zu Berlin*, **1861**: 512.

# OPINION 1848

## *Cubaris murina* Brandt, 1833 (Crustacea, Isopoda): generic and specific names conserved

**Keywords.** Nomenclature; taxonomy; Isopoda; *Cubaris*; *Cubaris murina*.

**Ruling**

(1) Under the plenary powers the following names are hereby suppressed:
  (a) the generic name *Cubaris* Billberg, 1820, and all uses of the name *Cubaris* prior to the publication of *Cubaris* Brandt, 1833, for the purposes of both the Principle of Priority and the Principle of Homonymy;
  (b) the following specific names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
    (i) *galbineus* Eschscholtz, 1823, as published in the binomen *Armadillo galbineus*;
    (ii) *brunnea* Brandt, 1833, as published in the binomen *Cubaris brunnea*.

(2) The name *Cubaris* Brandt, 1833 (gender: feminine), type species by subsequent designation by Budde-Lund (1909) *Cubaris murina* Brandt, 1833, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *murina* Brandt, 1833, as published in the binomen *Cubaris murina* (specific name of the type species of *Cubaris* Brandt, 1833), is hereby placed on the Official List of Specific Names in Zoology.

(4) The name CUBARIDAE Brandt, 1833 (type genus *Cubaris* Brandt, 1833) is hereby placed on the Official List of Family-Group Names in Zoology.

(5) The name *Cubaris* Billberg, 1820 is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology, as suppressed in (1)(a) above.

(6) The following names are hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology:
  (a) *galbineus* Eschscholtz, 1823, as published in the binomen *Armadillo galbineus* and as suppressed in (1)(b)(i) above;
  (b) *brunnea* Brandt, 1833, as published in the binomen *Cubaris brunnea* and as suppressed in (1)(b)(ii) above.

**History of Case 2910**

An application for the conservation of the generic and specific names of *Cubaris murina* Brandt, 1833 was received from Dr Pekka T. Lehtinen (*Zoological Museum, University of Turku, Turku, Finland*) and Drs Stefano Taiti and Franco Ferrara (*Centro di studio per la faunistica ed ecologia tropicali, Consiglio Nazionale delle Ricerche, Firenze, Italy*) on 1 November 1993. After correspondence the case was published in BZN **52**: 153–156 (June 1995). Notice of the case was sent to appropriate journals.

Comments in support from two members of the Nomenclature Committee of The Crustacea Society were received during the voting period. Dr A.B. Williams (*NOAA/NMFS Systematics Laboratory, Smithsonian Institution, Washington, D.C., U.S.A.*) noted: 'The application is directed towards conservation of names in current use and suppression of either threatening or forgotten names that are no longer

represented by original material. In my opinion this is a worthy proposal'. Dr Gary C.B. Poore (*Museum of Victoria, Abbotsford, Victoria, Australia*) commented: 'Of all the groups of isopod Crustacea the terrestrial Oniscidea present the greatest nomenclatural confusion. *Cubaris* Brandt, 1833 is a generic name that is widely used and understood by isopod taxonomists and ecologists. I support the proposal to conserve the name (and that of *Cubaris murina*) from the threat of the dubious senior homonym *Cubaris* Billberg, 1820'.

**Decision of the Commission**

On 1 March 1996 the members of the Commission were invited to vote on the proposals published in BZN **52**: 154–155. At the close of the voting period on 1 June 1996 the votes were as follows:

Affirmative votes — 22: Bayer, Bock, Bouchet, Cocks, Corliss, Hahn, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Trjapitzin

Negative votes — none.

Dupuis abstained.

No vote was received from Halvorsen.

Cogger and Ride were on leave of absence.

**Original references**

The following are the original references to the names placed on Official Lists and Official Indexes by the ruling given in the present Opinion:

*brunnea*, *Cubaris*, Brandt, 1833, *Bulletin de la Société Impériale des Naturalistes de Moscou*, **6**: 190.

CUBARIDAE Brandt, 1833, *Bulletin de la Société Impériale des Naturalistes de Moscou*, **6**: 189.

*Cubaris* Billberg, 1820, *Enumeratio Insectorum in Museo Gust. Joh. Billberg*, p. 137.

*Cubaris* Brandt, 1833, *Bulletin de la Société Impériale des Naturalistes de Moscou*, **6**: 189.

*galbineus*, *Armadillo*, Eschscholtz, 1823, *Mémoires de la Société Impériale des Naturalistes de Moscou*, **6**: 112.

*murina*, *Cubaris*, Brandt, 1833, *Bulletin de la Société Impériale des Naturalistes de Moscou*, **6**: 190.

The following is the reference for the designation of *Cubaris murina* Brandt, 1833 as the type species of the nominal genus *Cubaris* Brandt, 1833:

**Budde-Lund, G.** 1909. *Denkschriften der Medicinisch-Naturwissenschaftlichen Gesellschaft zu Jena*, **14**(1): 54.

## OPINION 1849

## *Livoneca* Leach, 1818 (Crustacea, Isopoda): the original spelling confirmed as correct, and the spelling *Lironeca* rejected

**Keywords.** Nomenclature; taxonomy; Isopoda; *Lironeca*; *Livoneca*.

**Ruling**

(1) The name *Livoneca* Leach, 1818 (gender: feminine), type species by subsequent designation by Fowler (1912) *Livoneca redmanii* Leach, 1818, is hereby placed on the Official List of Generic Names in Zoology.

(2) The name *redmanii* Leach, 1818, as published in the binomen *Livoneca redmanii* (specific name of the type species of *Livoneca* Leach, 1818), is hereby placed on the Official List of Specific Names in Zoology.

(3) The name LIVONECINAE Schioedte & Meinert, 1884 (type genus *Livoneca* Leach, 1818) is hereby placed on the Official List of Family-Group Names in Zoology.

(4) The name *Lironeca* Leach in White, 1847 is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology (an incorrect spelling of *Livoneca* Leach, 1818).

**History of Case 2915**

An application for the conservation of *Lironeca* Leach, 1818 as the correct original spelling of the generic name first published as *Livoneca* was received from Prof Ernest H. Williams, Jr. (*Caribbean Aquatic Animal Health Project, University of Puerto Rico, Lajas, Puerto Rico*) and Dr Thomas E. Bowman (*National Museum of Natural History, Smithsonian Institution, Washington, D.C., U.S.A.*) on 9 August 1993. After correspondence the case was published in BZN **51**: 224–226 (September 1994). Notice of the case was sent to appropriate journals.

Opposing comments from Prof L.B. Holthuis (*Nationaal Natuurhistorisch Museum, Leiden, The Netherlands*), from Dr Angelika Brandt (*Institut für Polarökologie, Christian-Albrechts-Universität zu Kiel, Kiel, Germany*), and from Dr Niel L. Bruce (*Zoologisk Museum, Copenhagen, Denmark*) were published in BZN **52**: 67–69 (March 1995). Replies by Dr Thomas E. Bowman (co-author of the application) and by Prof Ernest H. Williams, Jr. (co-author) & Dr Lucy Bunkley Williams (*University of Puerto Rico, Lajas, Puerto Rico*) were published in BZN **52**: 263–264 (September 1995).

Comments in support from Dr Giambattista Bello (*Istituto Arion, Mola di Bari, Italy*) and from Prof Robert Y. George (*The University of North Carolina at Wilmington, Wilmington, North Carolina, U.S.A.*) were published in BZN **52**: 178–179 (June 1995). (Dr Bello's comment was inadvertently repeated in BZN **52**: 264, September 1995, under the name 'Gianni Bello').

Comments from two members of the Nomenclature Committee of The Crustacea Society were received during the voting period. Dr A.B. Williams (*NOAA/NMFS Systematics Laboratory, Smithsonian Institution, Washington, D.C., U.S.A.*) noted: 'I agree with the authors of the application (para. 3) that it is patently obvious from their constructions themselves that Leach (1818) formed five names as anagrams of Caroline and three names as anagrams of Carolina. Though Leach gave no internal

evidence in his text that the generic names were based on such anagrams, there is evidence from the hand of the author himself on the reprint of his 1818 paper that he sent to Latreille that they are anagrams, for he corrected the names Livonèce and *Livoneca* to Lironèce and *Lironeca* every time they occurred (eight times), and there were also other corrected printer's errors, as pointed out by Williams & Bowman (para. 4). Strict adherence to literal interpretation of Article 32c(ii) would not warrant correction of the published name *Livoneca* to *Lironeca*, but documented arguments by the authors make a strong case for effecting this change'. Dr Gary C.B. Poore (*Museum of Victoria, Abbotsford, Victoria, Australia*) noted: 'This is a case where a well used name, *Livoneca*, has, through the actions of a few influential taxonomists, become slowly displaced during this century by a slightly different spelling, *Lironeca*. This trend has appeal only in that its proponents are attempting to relieve poor William Leach of the embarrassment of an apparent typographical error. In more recent times, Bruce's (1990) review of this genus and its relatives has become the definitive work and is likely to be followed. He used Leach's published spelling *Livoneca* and this is the one I advocate'.

In his comment (BZN **52**: 68) Prof Holthuis pointed out that Fowler (1912), and not Gurjanova (1936), was the first to designate *Livoneca redmanii* Leach, 1818 as the type species of *Livoneca* (cf. para. 1 of the application).

**Decision of the Commission**

On 1 March 1996 the members of the Commission were invited to vote on the proposals published in BZN **51**: 225. At the close of the voting period on 1 June 1996 the votes were as follows:

Affirmative votes — 11: Bock, Bouchet, Cocks, Corliss, Dupuis, Heppell, Kabata, Martins de Souza, Schuster, Starobogatov, Trjapitzin

Negative votes — 12: Bayer, Hahn, Holthuis, Kraus, Lehtinen, Minelli, Macpherson, Mahnert, Nielsen, Nye, Savage and Štys.

No vote was received from Halvorsen.

Cogger and Ride were on leave of absence.

Voting for, Kabata commented: 'It seems that the final judgement as to whether the spelling *Livoneca* can be seen as a lapsus is bound to be somewhat subjective. Considering the absence of 'v' from all other anagrams of the unfortunate, if wicked, Caroline(a), it is difficult to see Leach inserting it into *Lironeca*. I am in favour of approving the application'. Martins de Souza commented: 'The corrections by Leach on the reprint sent to Latreille (para. 4 of the application) clearly indicate that he originally used *Lironeca*'. Voting against, Lehtinen commented: 'The facts presented show that *Livoneca* was not a printer's error. Therefore a change from the original spelling cannot be supported'.

The required majority for the conservation of the spelling *Lironeca* was not reached. *Livoneca* Leach, 1818 is placed on the Official List as the correct original spelling.

**Original references**

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

*Lironeca* Leach, 1847, *in* White, A., *List of the specimens of Crustacea in the collections of the British Museum*, p. 109 (an incorrect spelling of *Livoneca* Leach, 1818).

*Livoneca* Leach, 1818, *in* Cuvier, F. (Ed.), *Dictionnaire des sciences naturelles*, vol. 12, p. 351.
LIVONICINAE Schioedte & Meinert, 1884, *Naturhistorisk Tidsskrift*, (3)**14**: 325.
*redmanni*, *Livoneca*, Leach, 1818, *in* Cuvier, F. (Ed.), *Dictionnaire des sciences naturelles*, vol. 12, p. 351.

The following is the reference for the designation of *Livoneca redmanii* Leach, 1818 as the type species of the nominal genus *Livoneca* Leach, 1818:

**Fowler, H.W.** 1912. *Annual Report of the New Jersey State Museum*, **1911**: 278.

# OPINION 1850

## *Nepa rustica* Fabricius, 1781 and *Zaitha stollii* Amyot & Serville, 1843 (currently *Diplonychus rusticus* and *Belostoma stollii*; Insecta, Heteroptera): specific names conserved

**Keywords.** Nomenclature; taxonomy; Heteroptera; *Diplonychus rusticus*; *Belostoma stollii*.

**Ruling**

(1) Under the plenary powers the following specific names are hereby suppressed:
   (a) *rustica* Fabricius, 1775, as published in the binomen *Nepa rustica*, and all uses of that name prior to the publication of *Nepa rustica* Fabricius, 1781, for the purposes of both the Principle of Priority and the Principle of Homonymy;
   (b) *plana* Sulzer, 1776, as published in the binomen *Nepa plana*, for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.

(2) It is hereby confirmed that *Nepa rustica* Fabricius, 1781 is the type species by monotypy of *Diplonychus* Laporte, 1833.

(3) The name *Diplonychus* Laporte, 1833 (gender: masculine), type species by monotypy *Nepa rustica* Fabricius, 1781, as confirmed in (2) above, is hereby placed on the Official List of Generic Names in Zoology.

(4) The following names are hereby placed on the Official List of Specific Names in Zoology:
   (a) *rustica* Fabricius, 1781, as published in the binomen *Nepa rustica* and as defined by the lectotype designated by Polhemus (1994) (specific name of the type species of *Diplonychus* Laporte, 1833);
   (b) *stollii* Amyot & Serville, 1843, as published in the binomen *Zaitha stollii*.

(5) The following names are hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology:
   (a) *rustica* Fabricius, 1775, as published in the binomen *Nepa rustica* and as suppressed in (1)(a) above;
   (b) *plana* Sulzer, 1776, as published in the binomen *Nepa plana* and as suppressed in (1)(b) above.

**History of Case 2941**

An application for the conservation of the specific names of *Nepa rustica* Fabricius, 1781 and *Zaitha stollii* Amyot & Serville, 1843 was received from Dr John T. Polhemus (*University of Colorado Museum, Englewood, Colorado, U.S.A.*) and Dr I.M. Kerzhner (*Zoological Institute, Russian Academy of Sciences, St Petersburg, Russia*) on 14 June 1994. After correspondence the case was published in BZN **52**: 40–43 (March 1995). Notice of the case was sent to appropriate journals.

It was noted on the voting paper that the lectotype designation for the nominal species *Nepa rustica* Fabricius, 1781 dated from Polhemus (1994; cf. para. 9 of the application), who noted (p. 691) that Fabricius (1781) referred to 'Mus. Dom. Banks'

(the Banks collection in the Natural History Museum, London) as containing the Asian *N. rustica*. Polhemus (p. 692) designated one of the two specimens in the Banks collection as the lectotype.

**Decision of the Commission**

On 1 March 1996 the members of the Commission were invited to vote on the proposals published in BZN **52**: 42. At the close of the voting period on 1 June 1996 the votes were as follows:

Affirmative votes — 23: Bayer, Bock, Bouchet, Cocks, Corliss, Dupuis, Hahn, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Trjapitzin

Negative votes — none.

No vote was received from Halvorsen.

Cogger and Ride were on leave of absence.

**Original references**

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

*Diplonychus* Laporte, 1833, *Magasin de Zoologie*, **2**: 18.

*plana*, *Nepa*, Sulzer, 1776, *Abgekürzte Geschichte der Insecten nach dem Linnaeischen System*, part 1, p. 92.

*rustica*, *Nepa*, Fabricius, 1775, *Systema entomologiae* ..., p. 691.

*rustica*, *Nepa*, Fabricius, 1781, *Species insectorum* ..., vol. 2, p. 333.

*stollii*, *Zaitha*, Amyot & Serville, 1843, *Histoire naturelle des insectes. Hémiptères*, p. 40.

The following is the reference for the designation of the lectotype of *Nepa rustica* Fabricius, 1781:

**Polhemus, J.T.** 1994. *Proceedings of the Entomological Society of Washington*, **96**: 692.

# OPINION 1851

## XANTHOLININI Erichson, 1839 and QUEDIINI Kraatz, [1857] (Insecta, Coleoptera): given precedence over some senior synonyms; *Quedius* Stephens, 1829: *Staphylinus levicollis* Brullé, 1832 designated as the type species

**Keywords.** Nomenclature; taxonomy; Coleoptera; AGRODINI; GYROHYPNINI; PLATYCNEMINI; QUEDIINI; XANTHOLININI; *Agrodes*; *Gyrohypnus*; *Platycnemus*; *Quedius*; *Xantholinus*; *Quedius levicollis*.

**Ruling**

(1) Under the plenary powers:
  (a) it is hereby ruled that the family-group name XANTHOLININI Erichson, 1839 and other family-group names based on *Xantholinus* Dejean, 1821 are given precedence over AGRODINI Nordmann, 1837 and other family-group names based on *Agrodes* Nordmann, 1837, and over GYROHYPNINI Kirby, 1837 and other family-group names based on *Gyrohypnus* Samuelle, 1819;
  (b) it is hereby ruled that the family-group name QUEDIINI Kraatz, [1857] and other family-group names based on *Quedius* Stephens, 1829 are given precedence over PLATYCNEMINI Nordmann, 1837 and other family-group names based on *Platycnemus* Nordmann, 1837;
  (c) it is hereby ruled that PLATYCNEMINI Nordmann, 1837 (type genus *Platycnemus* Nordmann, 1837) is not to be given priority over junior family-group names in general current usage in the STAPHYLININAE;
  (d) all previous fixations of type species for the nominal genus *Quedius* Stephens, 1829 are hereby set aside and *Staphylinus levicollis* Brullé, 1832 is designated as the type species.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:
  (a) *Agrodes* Nordmann, 1837 (gender: neuter), type species by monotypy *Agrodes elegans* Nordmann, 1837;
  (b) *Platycnemus* Nordmann, 1837 (gender: masculine), type species by monotypy *Platycnemus lateritius* Nordmann, 1837;
  (c) *Quedius* Stephens, 1829 (gender: masculine), type species by designation under the plenary powers in (1)(d) above *Staphylinus levicollis* Brullé, 1832.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:
  (a) *elegans* Nordmann, 1837, as published in the binomen *Agrodes elegans* (specific name of the type species of *Agrodes* Nordmann, 1837);
  (b) *lateritius* Nordmann, 1837, as published in the binomen *Platycnemus lateritius* (specific name of the type species of *Platycnemus* Nordmann, 1837);
  (c) *levicollis* Brullé, 1832, as published in the binomen *Staphylinus levicollis* (specific name of the type species of *Quedius* Stephens, 1829).

(4) The following names are hereby placed on the Official List of Family-Group Names in Zoology:

(a) XANTHOLININI Erichson, 1839 (type genus *Xantholinus* Dejean, 1821) with the endorsement that it and other family-group names based on *Xantholinus* are to be given precedence over AGRODINI Nordmann, 1837 (type genus *Agrodes* Nordmann, 1837) and other family-group names based on *Agrodes*, and over GYROHYPNINI Kirby, 1837 (type genus *Gyrohypnus* Samouelle, 1819) and other family-group names based on *Gyrohypnus*, whenever their type genera are placed in the same family-group taxon;

(b) AGRODINI Nordmann, 1837 (type genus *Agrodes* Nordmann, 1837) with the endorsement that it and other family-group names based on *Agrodes* are not to be given priority over XANTHOLININI Erichson, 1839 (type genus *Xantholinus* Dejean, 1821) and other family-group names based on *Xantholinus* whenever their type genera are placed in the same family-group taxon;

(c) GYROHYPNINI Kirby, 1837 (type genus *Gyrohypnus* Samouelle, 1819) with the endorsement that it and other family-group names based on *Gyrohypnus* are not to be given priority over XANTHOLININI Erichson, 1839 (type genus *Xantholinus* Dejean, 1821) and other family-group names based on *Xantholinus* whenever their type genera are placed in the same family-group taxon;

(d) QUEDIINI Kraatz, [1857] (type genus *Quedius* Stephens, 1829) with the endorsement that it and other family-group names based on *Quedius* are to be given precedence over PLATYCNEMINI Nordmann, 1837 (type genus *Platycnemus* Nordmann, 1837) and other family-group names based on *Platycnemus* whenever their type genera are placed in the same family-group taxon;

(e) PLATYCNEMINI Nordmann, 1837 (type genus *Platycnemus* Nordmann, 1837) with the endorsement that it and other family-group names based on *Platycnemus* are not to be given priority over junior family-group names in general current usage when *Platycnemus* and the relevant type genera are placed in the same family-group taxon.

**History of Case 2872**

An application for the family-group names XANTHOLININI Erichson, 1839 and QUEDIINI Kraatz, [1857] to be given precedence over some senior synonyms, and for the designation of *Staphylinus levicollis* Brullé, 1832 as the type species of *Quedius* Stephens, 1829, was received from Dr Alfred F. Newton, Jr. (*Field Museum of Natural History, Chicago, Illinois, U.S.A.*) on 21 December 1992. After correspondence the case was published in BZN **52**: 50–53 (March 1995). Notice of the case was sent to appropriate journals.

The names *Gyrohypnus* Samouelle, 1819 and *Xantholinus* Dejean, 1821, and those of their type species, were placed on Official Lists in Opinion 1250 (July 1983). However, the status of the names of the family-group taxa based on these genera was not then considered.

**Decision of the Commission**

On 1 March 1996 the members of the Commission were invited to vote on the proposals published in BZN **52**: 50–51. At the close of the voting period on 1 June 1996 the votes were as follows:

Affirmative votes — 21: Bayer, Bock, Bouchet, Cocks, Corliss, Dupuis, Hahn, Heppell, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Trjapitzin

Negative votes — 1: Holthuis.

Štys abstained.

No vote was received from Halvorsen.

Cogger and Ride were on leave of absence.

**Original references**

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

*Agrodes* Nordmann, 1837, *Symbolae ad monographiam staphylinorum*, p. 161.

AGRODINI Nordmann, 1837, *Symbolae ad monographiam staphylinorum*, p. 7.

*elegans*, *Agrodes*, Nordmann, 1837, *Symbolae ad monographiam staphylinorum*, p. 161.

GYROHYPNINI Kirby, 1837, *in* Richardson, J., Swainson, W. & Kirby, W. (Eds.), *Fauna Boreali-Americana; or the zoology of the northern parts of British America* ..., part 4, p. 88.

*lateritius*, *Platycnemus*, Nordmann, 1837, *Symbolae ad monographiam staphylinorum*, p. 135.

*levicollis*, *Staphylinus*, Brullé, 1832, *in* Bory St Vincent, J.B.G.M., *Expédition scientifique de Morée. Section des sciences physiques*, vol. 3, part 1 (Zoologie), section 2 (Des animaux articles), p. 131.

PLATYCNEMINI Nordmann, 1837, *Symbolae ad monographiam staphylinorum*, p. 6.

*Platycnemus* Nordmann, 1837, *Symbolae ad monographiam staphylinorum*, p. 135.

QUEDIINI Kraatz, [1857], *in* Erichson, W.F., *Naturgeschichte der Insekten Deutschlands*, Abteilung 1 (Coleoptera), vol. 2, p. 473.

*Quedius* Stephens, 1829, *The nomenclature of British insects; being a compendious list of such species as are contained in the Systematic Catalogue of British insects, and forming a guide to their classification* ..., p. 22.

XANTHOLININI Erichson, 1839, *Genera et species staphylinorum insectorum coleopterorum familiae*, part 1, p. 28.

# OPINION 1852

## *Melissodes desponsa* Smith, 1854 and *M. agilis* Cresson, 1878 (Insecta, Hymenoptera): specific names conserved

**Keywords.** Nomenclature; taxonomy; Hymenoptera; solitary bees; *Melissodes*.

**Ruling**

(1) Under the plenary powers the following names are hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
  (a) *americana* Lepeletier, 1841, as published in the binomen *Macrocera americana*;
  (b) *pensylvanica* Lepeletier, 1841, as published in the binomen *Macrocera pensylvanica*;
  (c) *philadelphica* Lepeletier, 1841, as published in the binomen *Macrocera philadelphica*.

(2) The following names are hereby placed on the Official List of Specific Names in Zoology:
  (a) *desponsa* Smith, 1854, as published in the binomen *Melissodes desponsa*;
  (b) *agilis* Cresson, 1878, as published in the binomen *Melissodes agilis*.

(3) The following names are hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology:
  (a) *americana* Lepeletier, 1841, as published in the binomen *Macrocera americana* and as suppressed in (1)(a) above;
  (b) *pensylvanica* Lepeletier, 1841, as published in the binomen *Macrocera pensylvanica* and as suppressed in (1)(b) above;
  (c) *philadelphica* Lepeletier, 1841, as published in the binomen *Macrocera philadelphica* and as suppressed in (1)(c) above.

**History of Case 2945**

An application for the conservation of the specific names of *Melissodes desponsa* Smith, 1854 and *M. agilis* Cresson, 1878 was received from Dr Wallace E. LaBerge (*Center for Biodiversity, Illinois Natural History Survey, Champaign, Illinois, U.S.A.*) on 8 August 1994. After correspondence the case was published in BZN **52**: 159–161 (June 1995). Notice of the case was sent to appropriate journals.

**Decision of the Commission**

On 1 March 1996 the members of the Commission were invited to vote on the proposals published in BZN **52**: 160–161. At the close of the voting period on 1 June 1996 the votes were as follows:

Affirmative votes — 20: Bayer, Bock, Bouchet, Cocks, Corliss, Hahn, Heppell, Holthuis, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Trjapitzin

Negative votes — 2: Kabata and Lehtinen.

Dupuis abstained.

No vote was received from Halvorsen.

Cogger and Ride were on leave of absence.

Lehtinen commented: 'The type material of all three of Lepeletier's (1841) nominal species is in a well-known museum and Smith's (1854) original description of *Melissodes desponsa* suggested that this taxon might be the female of *M. americana* (para. 3 of the application). The neglect of proper revisionary work by American authors is not a sufficient reason to deviate from priority'.

## Original references

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

*agilis*, *Melissodes*, Cresson, 1878, *Proceedings of the Academy of Natural Sciences of Philadelphia*, **30**(2): 204.

*americana*, *Macrocera*, Lepeletier, 1841, *Histoire naturelle des insectes*. Hyménoptères, vol. 2, p. 92.

*desponsa*, *Melissodes*, Smith, 1854, *Catalogue of hymenopterous insects in the collection of the British Museum*, part 2 (Apidae), p. 310.

*pensylvanica*, *Macrocera*, Lepeletier, 1841, *Histoire naturelle des insectes*. Hyménoptères, vol. 2, p. 97.

*philadelphica*, *Macrocera*, Lepeletier, 1841, *Histoire naturelle des insectes*. Hyménoptères, vol. 2, p. 110.

# OPINION 1853

## *Xerammobates* Popov, 1951 (Insecta, Hymenoptera): *Ammobates oxianus* Popov, 1951 designated as the type species

**Keywords.** Nomenclature; taxonomy; Hymenoptera; parasitic bees; *Ammobates*; *Xerammobates*; *Ammobates* (*Xerammobates*) *oxianus*.

**Ruling**

(1) Under the plenary powers all previous fixations of type species for the nominal genus *Xerammobates* Popov, 1951 are hereby set aside and *Ammobates oxianus* Popov, 1951 is designated as the type species.

(2) The name *Xerammobates* Popov, 1951 (gender: masculine), type species by designation under the plenary powers in (1) above *Ammobates oxianus* Popov, 1951, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *oxianus* Popov, 1951, as published in the binomen *Ammobates* (*Xerammobates*) *oxianus* (specific name of the type species of *Xerammobates* Popov, 1951), is hereby placed on the Official List of Specific Names in Zoology.

**History of Case 2884**

An application for the designation of *Ammobates* (*Xerammobates*) *oxianus* Popov, 1951 as the type species of *Xerammobates* Popov, 1951 was received from Dr Donald B. Baker (*University Museum, Oxford, U.K.*) on 11 March 1993. After correspondence the case was published in BZN **52**: 157–158 (June 1995). Notice of the case was sent to appropriate journals.

A comment from Dr Charles D. Michener (*Snow Entomological Museum, University of Kansas, Lawrence, Kansas, U.S.A.*), received during the voting period, noted that *Micropasites* Warncke, 1983, which is a junior homonym of *Micropasites* Linsley, 1942 (para. 2 of the application), had been renamed *Ebmeriana* by Pagliano & Scaramozzino (1990; *Memorie della Società Entomologica Italiana*, **68**: 5) and that *Ebmeriana* was a potentially valid name for the genus. A reply by the author of the application noted that he was treating *Ebmeriana* (= *Micropasites* Warncke, 1983; type species *Pasites tunensis* Warncke, 1983, i.e. *Ammobates* (*X.*) *minutissimus* Mavromoustakis, 1959) as a junior subjective synonym of *Xerammobates*.

**Decision of the Commission**

On 1 March 1996 the members of the Commission were invited to vote on the proposals published in BZN **52**: 158. At the close of the voting period on 1 June 1996 the votes were as follows:

Affirmative votes — 22: Bayer, Bock, Bouchet, Cocks, Corliss, Hahn, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Trjapitzin

Negative votes — none.

Dupuis abstained.

No vote was received from Halvorsen.

Cogger and Ride were on leave of absence.

## Original references

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

*oxianus*, *Ammobates* (*Xerammobates*), Popov, 1951, *Trudy Zoologicheskogo Instituta*, **9**(3): 917.

*Xerammobates* Popov, 1951, *Trudy Zoologicheskogo Instituta*, **9**(3): 904.

# OPINION 1854

## *Rhabdomeson* Young & Young, 1874 (Bryozoa): *Rhabdomeson progracile* Wyse Jackson & Bancroft, 1995 designated as the type species

**Keywords.** Nomenclature; taxonomy; Bryozoa; Carboniferous; *Rhabdomeson*.

**Ruling**

(1) Under the plenary powers all previous fixations of type species for the nominal genus *Rhabdomeson* Young & Young, 1874 are hereby set aside and *Rhabdomeson progracile* Wyse Jackson & Bancroft, 1995 is designated as the type species.

(2) The name *Rhabdomeson* Young & Young, 1874 (gender: neuter), type species by designation under the plenary powers in (1) above *Rhabdomeson progracile* Wyse Jackson & Bancroft, 1995, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *progracile* Wyse Jackson & Bancroft, 1995, as published in the binomen *Rhabdomeson progracile* (specific name of the type species of *Rhabdomeson* Young & Young, 1874), is hereby placed on the Official List of Specific Names in Zoology.

**History of Case 2810**

An application for the designation of *Rhabdomeson progracile* Wyse Jackson & Bancroft, 1995 as the type species of *Rhabdomeson* Young & Young, 1874 was received from Drs P.N. Wyse Jackson (*Trinity College, Dublin, Ireland*) and A.J. Bancroft (*Mynydd Isa, near Mold, Clwyd, Wales, U.K.*) on 25 February 1991. After correspondence and the publication of Wyse Jackson & Bancroft (1995) the case was published in BZN **52**: 162–163 (June 1995). Notice of the case was sent to appropriate journals.

**Decision of the Commission**

On 1 March 1996 the members of the Commission were invited to vote on the proposals published in BZN **52**: 163. At the close of the voting period on 1 June 1996 the votes were as follows:

Affirmative votes — 20: Bayer, Bock, Bouchet, Cocks, Corliss, Hahn, Heppell, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Trjapitzin

Negative votes — 1: Štys.

Dupuis and Holthuis abstained.

No vote was received from Halvorsen.

Cogger and Ride were on leave of absence.

**Original references**

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

*progracile*, *Rhabdomeson*, Wyse Jackson & Bancroft, 1995, *Journal of Paleontology*, **69**: 30.

*Rhabdomeson* Young & Young, 1874, *Annals and Magazine of Natural History*, (4)**13**: 337.

# OPINION 1855

## *Agonus* Bloch & Schneider, 1801 (Osteichthyes, Scorpaeniformes): conserved; and AGONIDAE Kirby, 1837 (Insecta, Coleoptera): spelling emended to AGONUMIDAE, so removing the homonymy with AGONIDAE Swainson, 1839 (Osteichthyes, Scorpaeniformes)

**Keywords.** Nomenclature; taxonomy; Osteichthyes; Scorpaeniformes; Coleoptera; AGONIDAE; AGONUMIDAE; *Agonus*; *Agonum*.

**Ruling**

(1) Under the plenary powers:
  (a) the generic name *Aspidophorus* Lacépède, [1801] (Osteichthyes) is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;
  (b) it is hereby ruled that for the purposes of Article 29 of the Code the stem of the generic name *Agonum* Bonelli, 1810 (Insecta) is AGONUM-.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:
  (a) *Agonus* Bloch & Schneider, 1801 (gender: masculine), type species by subsequent designation by Tilesius in Pallas ([1814]) *Cottus cataphractus* Linnaeus, 1758 (Osteichthyes);
  (b) *Agonum* Bonelli, 1810 (gender: neuter), type species by subsequent designation by Curtis (1827) *Carabus marginatus* Linnaeus, 1758 (Insecta).

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:
  (a) *cataphractus* Linnaeus, 1758, as published in the binomen *Cottus cataphractus* (specific name of the type species of *Agonus* Bloch & Schneider, 1801) (Osteichthyes);
  (b) *marginatus* Linnaeus, 1758, as published in the binomen *Carabus marginatus* (specific name of the type species of *Agonum* Bonelli, 1810) (Insecta).

(4) The following names are hereby placed on the Official List of Family-Group Names in Zoology:
  (a) AGONIDAE Swainson, 1839, type genus *Agonus* Bloch & Schneider, 1801 (Osteichthyes);
  (b) AGONUMIDAE Kirby, 1837, type genus *Agonum* Bonelli, 1810 (spelling emended by the ruling in (1)(b) above) (Insecta).

(5) The name *Aspidophorus* Lacépède, [1801] (Osteichthyes) is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology, as suppressed in (1)(a) above.

(6) The name AGONIDAE Kirby, 1837 (Insecta) is hereby placed on the Official Index of Rejected and Invalid Family-Group Names in Zoology (spelling emended to AGONUMIDAE in (1)(b) above).

**History of Case 2897**

An application for the conservation of the generic name *Agonus* Bloch & Schneider, 1801, and for the removal of the homonymy between the family-group

names based on *Agonus* Bloch & Schneider, 1801 (Osteichthyes) and *Agonum* Bonelli, 1810 (Insecta), was received from Dr B.A. Sheiko (*Kamchatka Institute of Ecology, Russian Academy of Sciences, Petropavlovsk-Kamchatsky, Russia*) on 10 June 1993. After correspondence the case was published in BZN **52**: 57–60 (March 1995). Notice of the case was sent to appropriate journals.

**Decision of the Commission**

On 1 March 1996 the members of the Commission were invited to vote on the proposals published in BZN **52**: 59. At the close of the voting period on 1 June 1996 the votes were as follows:

Affirmative votes — 21: Bayer, Bock, Bouchet, Cocks, Corliss, Hahn, Heppell, Holthuis, Kabata, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli (part), Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Trjapitzin

Negative votes — 2: Dupuis and Lehtinen.

No vote was received from Halvorsen.

Cogger and Ride were on leave of absence.

Dupuis commented that he was opposed to the conservation of the name for the monospecific genus *Agonus* Bloch & Schneider, 1801, which was of uncertain date and, under the Code, a junior synonym. Lehtinen commented: 'The coleopteran family-group name is earlier than the homonymous fish family-group name, while both relate to large and well-known groups. The information given in para. 8 of the application on the use of AGONINI Kirby, 1837 in Coleoptera is misleading. The name has recently been used in the European handbook *Die Käfer Mitteleuropas* by Klausnitzer (1991), as well as in the earlier North American handbook by Hatch (1953). The homonymy could have been avoided by using a family-group name based on the name *Aspidophorus* Lacepède, [1801], or by using the stem AGONUS- for the junior family-group name for the fishes'. Minelli voted for the conservation of the generic name *Agonus* Bloch & Schneider, 1801 but not for removing the homonymy between the coleopteran and fish family-group names.

**Original references**

The following are the original references to the names placed on Official Lists and Official Indexes by the ruling given in the present Opinion:

AGONIDAE Kirby, 1837, *in* Richardson, J., Swainson, W. & Kirby, W. (Eds.), *Fauna Boreali-Americana ...*, part 4, p. 23 (a now incorrect original spelling of AGONUMIDAE).

AGONIDAE Swainson, 1839, *The natural history of fishes, amphibians, and reptiles or monocardian animals*, vol. 2, p. 181.

*Agonum* Bonelli, 1810, Observations entomologiques. Première partie. Tabula Synoptica exhibens genera Carabicorum in Sectiones et Stirpes disposita. (Text published, 1810, in *Mémoires de l'Académie Impériale des Sciences, Littérature et Beaux-Arts de Turin*, **18**: 21–78).

AGONUMIDAE Kirby, 1837, *in* Richardson, J., Swainson, W. & Kirby, W. (Eds.), *Fauna Boreali-Americana ...*, part 4, p. 23 (spelled as AGONIDAE, now incorrect).

*Agonus* Bloch & Schneider, 1801, *M.E. Blochii ... Systema Ichthyologiae iconibus cx illustratum. Post obitum auctoris opus inchoatum absolvit, correxit, interpolavit J. Gottlob Schneider ...*, vol. 1, p. 104.

*Aspidophorus* Lacépède, [1801], *Histoire naturelle des poissons*, vol. 3, p. 221.

*cataphractus*, *Cottus*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 264.

*marginatus*, *Carabus*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 416.

The following is the reference for the designation of *Cottus cataphractus* Linnaeus, 1758 as the type species of the nominal genus *Agonus* Bloch & Schneider, 1801:

**Tilesius von Tilenau, W.G.** [1814]. *In* Pallas, P.S., *Zoographia Rosso-Asiatica*, vol. 3, p. 109, footnote.

The following is the reference for the designation of *Carabus marginatus* Linnaeus, 1758 as the type species of the nominal genus *Agonum* Bonelli, 1810:

**Curtis, J.** 1827. *British entomology* ..., vol. 4, text to pl. 183.

# OPINION 1856

## *Lycognathophis* Boulenger, 1893 (Reptilia, Serpentes): conserved

**Keywords.** Nomenclature; taxonomy; Reptilia; Serpentes; snakes; Seychelles; *Lycognathophis*.

**Ruling**

(1) Under the plenary powers the name *Scopelophis* Fitzinger, 1843 is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.

(2) The name *Lycognathophis* Boulenger, 1893 (gender: masculine), type species by monotypy *Psammophis seychellensis* Schlegel, 1837, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *seychellensis* Schlegel, 1837, as published in the binomen *Psammophis seychellensis* (specific name of the type species of *Lycognathophis* Boulenger, 1893), is hereby placed on the Official List of Specific Names in Zoology.

(4) The name *Scopelophis* Fitzinger, 1843, as suppressed in (1) above, is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology.

**History of Case 2877**

An application for the conservation of the generic name *Lycognathophis* Boulenger, 1893 was received from Prof Hobart M. Smith (*University of Colorado, Boulder, Colorado, U.S.A.*) and Dr Van Wallach (*Center for Vertebrate Studies, Northeastern University, Boston, Massachusetts, U.S.A.*) on 12 February 1993. After correspondence the case was published in BZN **51**: 330–331 (December 1994). Notice of the case was sent to appropriate journals.

Comments in support from Prof Hidetoshi Ota (*University of the Ryukyus, Nishihara, Okinawa, Japan*), Prof Ronald A. Nussbaum (*Museum of Zoology, University of Michigan, Ann Arbor, Michigan, U.S.A.*) and Prof Edmond V. Malnate (*Academy of Natural Sciences, Philadelphia, Pennsylvania, U.S.A.*) were published in BZN **52**: 186 (June 1995). A note of support from Prof Edwin L. Bell (*Albright College, Reading, Pennsylvania, U.S.A.*), Dr A. Dale Belcher (*Albuquerque Biological Park, Albuquerque, New Mexico, U.S.A.*), Dr Donald G. Broadley (*Natural History Museum, Centenary Park, Bulawayo, Zimbabwe*), Dr Joseph T. Collins (*Natural History Museum, University of Kansas, Lawrence, Kansas, U.S.A.*) and Dr Raymond F. Laurent (*Fundación Lillo, Tucumán, Argentina*) was published at the same time.

A further comment in support from Prof Lauren E. Brown (*Illinois State University, Normal, Illinois, U.S.A.*) was published in BZN **52**: 271 (September 1995).

**Decision of the Commission**

On 1 December 1995 the members of the Commission were invited to vote on the proposals published in BZN **51**: 331. At the close of the voting period on 1 March 1996 the votes were as follows:

Affirmative votes — 23: Bayer, Bock, Cocks, Cogger, Corliss, Dupuis, Hahn, Halvorsen, Heppell, Holthuis, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Ride, Savage, Schuster, Starobogatov, Štys, Trjapitzin

Negative votes — 3: Bouchet, Kabata and Lehtinen.

Bouchet commented: 'Dowling (1990) and the application itself demonstrate that the name *Lycognathophis* Boulenger, 1893, although in current use, 'has appeared in relatively few publications'. Priority should apply'.

## Original references

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

*Scopelophis* Fitzinger, 1843, *Systema Reptilium*. Fasciculus primus (Amblyglossae), p. 26.

*Lycognathophis* Boulenger, 1893, *Catalogue of the snakes in the British Museum* (*Natural History*), vol. 1, p. 317.

*seychellensis*, *Psammophis*, Schlegel, 1837, *Essai sur la physionomie des serpens*, vol. 1 (Partie générale), p. 155.

## INFORMATION AND INSTRUCTIONS FOR AUTHORS

The following notes are primarily for those preparing applications; other authors should comply with the relevant sections. Applications should be prepared in the format of recent parts of the Bulletin; manuscripts not prepared in accordance with these guidelines may be returned.

*General.* Applications are requests to the Commission to set aside or modify the Code's provisions as they relate to a particular name or group of names when this appears to be in the interest of stability of nomenclature. Authors submitting cases should regard themselves as acting on behalf of the zoological community and the Commission will treat applications on this basis. Applicants are advised to discuss their cases with other workers in the same field before submitting applications, so that they are aware of any wider implications and the likely reactions of other zoologists.

*Text.* Typed in double spacing, this should consist of numbered paragraphs setting out the details of the case and leading to a final paragraph of formal proposals. Text references should give dates and page numbers in parentheses, e.g. 'Daudin (1800, p. 39) described . . .'. The Abstract will be prepared by the Secretariat.

*References.* These should be given for all authors cited. Where possible, ten or more relatively recent references should be given illustrating the usage of names which are to be conserved or given precedence over older names. The title of periodicals should be in full and be underlined; numbers of volumes, parts, etc. should be in arabic figures, separated by a colon from page numbers. Book titles should be underlined and followed by the number of pages and plates, the publisher and place of publication.

*Submission of Application.* Two copies should be sent to: The Executive Secretary, The International Commission on Zoological Nomenclature, c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. It would help to reduce the time that it takes to process the large number of applications received if the typescript could be accompanied by a disk with copy in IBM PC compatible format, preferably in ASCII text. It would also be helpful if applications were accompanied by photocopies of relevant pages of the main references where this is possible.

The Commission's Secretariat is very willing to advise on all aspects of the formulation of an application.

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# The Bulletin of Zoological Nomenclature

ICZN *The Official Periodical of the International Commission on Zoological Nomenclature*

## THE BULLETIN OF ZOOLOGICAL NOMENCLATURE

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BULLETIN OF ZOOLOGICAL NOMENCLATURE

Volume 53, part 4 (pp. 229–307) 20 December 1996

## Notices

(a) *Invitation to comment*. The Commission is authorised to vote on applications published in the *Bulletin of Zoological Nomenclature* six months after their publication but this period is normally extended to enable comments to be submitted. Any zoologist who wishes to comment on any of the applications is invited to send his contribution to the Executive Secretary of the Commission as quickly as possible.

(b) *Invitation to contribute general articles*. At present the *Bulletin* comprises mainly applications concerning names of particular animals or groups of animals, resulting comments and the Commission's eventual rulings (Opinions). Proposed amendments to the Code are also published for discussion.

Articles or notes of a more general nature are actively welcomed provided that they raise nomenclatural issues, although they may well deal with taxonomic matters for illustrative purposes. It should be the aim of such contributions to interest an audience wider than some small group of specialists.

(c) *Receipt of new applications*. The following new applications have been received since going to press for volume 53, part 3 (published on 30 September 1996). Under Article 80 of the Code, existing usage is to be maintained until the ruling of the Commission is published.

(1) *Pseudophryne vivipara* Tornier, 1905 (currently *Nectophrynoides vivipara*; Amphibia, Anura): proposed replacement of neotype by a rediscovered syntype. (Case 3021). J.C. Poynton.

(2) *Catalogue des Mammifères du Muséum National d'Histoire Naturelle* by E. Geoffroy-Saint-Hilaire (1803): proposed placement on the Official List of Available Works. (Case 3022). P. Hershkovitz.

(3) DASYPODIDAE Gray, 1821 (Mammalia, Edentata) and DASYPODIDAE Börner, 1919 (Insecta, Hymenoptera): proposed removal of the homonymy. (Case 3023). B.A. Alexander & C.D. Michener.

(4) *Euscorpius* Thorell, 1876 (Arachnida, Scorpiones): proposed conservation. (Case 3024). V. Fet.

(5) *Scorpius mingrelicus* Kessler, 1874 (currently *Euscorpius mingrelicus*; Arachnida, Scorpiones): proposed conservation of the specific name. (Case 3025). V. Fet.

(6) *Androctonus caucasicus* Nordmann, 1840 (currently *Mesobuthus caucasicus*; Arachnida, Scorpiones): proposed conservation of the specific name. (Case 3026). V. Fet.

(7) *Musca balteata* De Geer, 1776 (currently *Episyrphus balteatus*; Insecta, Diptera): proposed conservation of the specific name. (Case 3027). U. Schmid.

(8) *Aphanius* Nardo, 1827 (Osteichthyes, Cyprinodontiformes): proposed conservation. (Case 3028). M. Kottelat & A. Wheeler.

(9) *Acipenser naccarii* Bonaparte, 1836 (Osteichthyes, Acipenseriformes): proposed conservation of the specific name. (Case 3029). M. Kottelat & A. Wheeler.

(d) *Ruling of the Commission.* Each Opinion published in the *Bulletin* constitutes an official ruling of the International Commission on Zoological Nomenclature, by virtue of the votes recorded, and comes into force on the day of publication of the *Bulletin.*

## Election of members of the International Commission on Zoological Nomenclature

At the International Congress of Systematic and Evolutionary Biology (ICSEB V) held in Budapest in August 1996 the members of the IUBS Section of Zoological Nomenclature elected the following zoologists as members of the Commission:

Prof DENIS BROTHERS (*Department of Zoology and Entomology, University of Natal Pietermaritzburg, Private Bag X01, Scottsville, 3209 South Africa*). Prof Brothers's main research interests are the biology and systematics of aculeate Hymenoptera.

Dr WILLIAM ESCHMEYER (*Department of Ichthyology, California Academy of Sciences, Golden Gate Park, San Francisco, California 94118–4599, U.S.A.*). Dr Eschmeyer's research is on marine fish, especially Scorpaeniformes. He is the author of the *Catalog of the Genera of Recent Fishes.*

Dr IZYASLAV KERZHNER (*Zoological Institute, Russian Academy of Sciences, St Petersburg 199034, Russia*). Dr Kerzhner's research is on the taxonomy, faunistics and habits of Heteroptera. He is Editor of *Zoosystematica Rossica.*

Prof SHUNSUKE MAWATARI (*Zoological Institute, Faculty of Science, Hokkaido University, Sapporo 060, Japan*). Prof Mawatari's research is on the taxonomy of marine invertebrates, particularly bryozoans.

Dr LÁSZLÓ PAPP (*Hungarian Museum of Natural History, Baross utca 13, H-1088 Budapest, Hungary*). Dr Papp's research is on the morphology and taxonomy of Diptera, and he is Technical Editor of the *Manual of Palaearctic Diptera.*

Prof DAVID PATTERSON (*School of Biological Sciences, The University of Sydney, NSW 2006, Australia*). Prof Patterson works on the ultrastructure, evolution and classification of Protista, especially flagellates.

Prof DA-XIANG SONG (*Institute of Zoology, Academia Sinica, 19 Zhongguancun Lu, Haitien, Beijing, China*). Prof Song's research interests include the taxonomy of spiders and of leeches. He is the President of the China Zoological Society, and Editor-in-chief of *Acta Zoologica Sinica.*

## Towards Stability in the Names of Animals

The International Commission on Zoological Nomenclature was founded on 18 September 1895. In recognition of its Centenary a history of the development of nomenclature since the 18th century and of the Commission has been published entitled '*Towards Stability in the Names of Animals — a History of the International Commission on Zoological Nomenclature 1895–1995*' (ISBN 0 85301 005 6). It is 104 pages (250 × 174 mm) with 18 full-page illustrations, 14 being of eminent zoologists who played a crucial part in the evolution of the system of animal nomenclature as universally accepted today. The book contains a list of all the Commissioners from 1895 to the present. The main text was written by R.V. Melville (former Secretary of the Commission) and has been completed and updated following his death.

Copies may be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. *or* A.A.Z.N., Attn. Dr Al Norrbom, c/o USDA Systematic Entomology Laboratory, MRC-168, National Museum of Natural History, Washington D.C. 20560, U.S.A.

The cost is £30 or $50 (including surface postage); members of the American and European Associations for Zoological Nomenclature are offered the reduced price of £20 or $35. Payment should accompany orders.

## Official Lists and Indexes of Names and Works in Zoology — Second Supplement to 1990

*The Official Lists and Indexes of Names and Works in Zoology* was published in 1987. This book gives details of all the names and works on which the Commission has ruled since it was set up in 1895, up to 1985; there are about 9,900 entries.

Copies can be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. *or* A.A.Z.N., Attn. Dr Al Norrbom, c/o USDA Systematic Entomology Laboratory, MRC-168, National Museum of Natural History, Washington D.C. 20560, U.S.A. The cost is £60 or $110, but members of the American Association for Zoological Nomenclature or the European Association for Zoological Nomenclature are offered the reduced price of £40 or $75; payment should accompany orders.

In the five years 1986–1990, 946 names and five works were added to the Official Lists and Official Indexes. A supplement has been prepared giving these additional entries, together with some amendments and updatings to entries in the 1987 volume. Copies can be obtained without charge from either of the above addresses.

## International Trust for Zoological Nomenclature

### Financial Report for 1995

In celebration of the centenary of the foundation of the Commission on 18 September 1895, a Centenary History entitled *Towards Stability in the Names of Animals* was published in August. The costs of printing and distribution were £4,487, but of this £1,386 was donated to the Trust by the family and friends of the author, Richard V. Melville, who died before completion of this book. The Trust is particularly grateful to these generous donors. Sales of the book in 1995 totalled £1,541, so the net cost to the Trust in the year was £1,560.

The Trust's deficit for 1995 was £4,441. This is only partly accounted for by the cost of the Centenary History as stated above, the remainder being the amount by which the Trust's income from publications, interest and donations failed to keep pace with costs.

Nearly half the Trust's income came from sales of publications, mainly from the *Bulletin of Zoological Nomenclature* which yielded an income of £28,811. Sales of the *Official Lists and Indexes* and the *International Code of Zoological Nomenclature* brought the total income from publications to £32,824. Income from grants remained at £9,000, but the £15,928 received from donations was slightly less than in 1994. Investment interest of £10,017 was £362 more than in 1994. The total income for the year was £67,834.

The main expenditure in 1995 was £53,576 for the salaries and National Insurance of the Secretariat of the International Commission on Zoological Nomenclature. Printing of the *Bulletin of Zoological Nomenclature* and the Centenary History and distribution of all publications amounted to £16,386. Other costs for office expenditure (£1,922) and depreciation of office equipment (£391) brought the total expenditure to £72,275.

The Commission Secretariat was again housed in The Natural History Museum, London, whom we thank for their continuing support. The Trust wishes to express its thanks to all the donors listed below who contributed to its work during the year. Continuing support of this kind is vital if the Commission is to carry out its work for the international zoological and palaeontological community.

M.K. HOWARTH
Secretary and Managing Director
14 August 1996

### List of donations and grants received during the year 1995

| | |
|---|---|
| American Association for Zoological Nomenclature | £6,079 |
| W.F.H. Ansell | £10 |
| Australian Academy of Science | £466 |
| Conchological Society, U.K. | £50 |
| Freshwater Biological Association, U.K. | £5 |
| Amerada Hess Ltd. | £250 |
| Ichthyological Society of Japan | £64 |
| International Palaeontological Association | £30 |
| Mammal Society, U.K. | £50 |

| | |
|---|---|
| Marine Biological Association, U.K. | £150 |
| Melville donations for the Centenary History | £1,386 |
| Nuffield Foundation | £1,000 |
| Paleontological Society of America | £635 |
| Royal Danish Academy of Sciences and Letters | £101 |
| Royal Entomological Society of London | £300 |
| Royal Society of London | £9,000 |
| Royal Society of Victoria | £155 |
| Russian Academy of Sciences | £1,021 |
| St John's College, Cambridge | £200 |
| Gesellschaft für Naturkunde, Stuttgart | £193 |
| Swedish Natural Science Research Council | £1,000 |
| Systematics Association, U.K. | £500 |
| Academia Sinica, Taiwan | £125 |
| Toyota Foundation, Japan | £1,819 |
| Dr J.A. Waters | £190 |
| Zoological Society of London | £150 |
| Total | £24,928 |

## INTERNATIONAL TRUST FOR ZOOLOGICAL NOMENCLATURE INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 DECEMBER 1995

| | | |
|---|---|---|
| *Income* | | |
| SALE OF PUBLICATIONS | | |
| Bulletin of Zoological Nomenclature | £28,811 | |
| International Code of Zoological Nomenclature | 1,955 | |
| Official Lists and Indexes | 517 | |
| Centenary History | 1,541 | |
| | 32,824 | |
| GRANTS AND DONATIONS | | 24,928 |
| SUNDRY INCOME | | 65 |
| BANK AND INVESTMENT INTEREST | | 10,017 |
| | | 67,834 |
| *Expenditure* | | |
| SALARIES, NATIONAL INSURANCE AND FEES | 53,576 | |
| OFFICE EXPENSES | 1,922 | |
| PRINTING AND DISTRIBUTION OF PUBLICATIONS | 16,386 | |
| DEPRECIATION OF OFFICE EQUIPMENT | 391 | |
| | | 72,275 |
| *Deficit for the year* | | £4,441 |

## The International Commission on Zoological Nomenclature

### General Session of the Commission, Budapest, 16–23 August 1996

Present: Prof A. Minelli (President), Commissioners Bock, Bouchet, Dupuis, Heppell, Kraus, Lehtinen, Nielsen, Ride and (from 18 August) Starobogatov. Dr Tubbs (Executive Secretary) and Mrs A. Gentry were present from the Secretariat.

1. Apologies for absence had been received from Commissioners Bayer, Cocks, Cogger, Corliss, Hahn, Halvorsen, Kabata, Mahnert, Martins de Souza, Nye, Savage, Schuster, Štys and Trjapitzin.

2. The Minutes of the previous General Session of the Commission (Amsterdam, September 1991; BZN **48**: 286–292) were accepted and signed.

3. The Commission noted and accepted the Executive Secretary's Report to IUBS covering the years 1991–1994.

4. *Developments since the previous General Session*

(a) *Changes in membership*. Two Commissioners (Prof L.B. Holthuis and Prof A. Willink) had retired on reaching the age limit, and two others (Dr F.C. Thompson and Dr S.-I. Uéno) had resigned. The tenure of six members had been due for completion at the 1994 IUBS General Assembly, but no Session of the Commission had been held then and they had agreed to serve until the close of the current Session; these were Commissioners Bayer, Corliss, Hahn, Halvorsen, Starobogatov and Trjapitzin. Members present wished to thank all those who had left, or were leaving, for their services to nomenclature and to the Commission.

(b) *Officers of the Commission*. Prof Dr O. Kraus had completed his six-year term as President, and Prof A. Minelli had been elected to succeed him with effect from 17 November 1995. Dr H.G. Cogger had been elected as Vice-President in December 1991.

(c) *Bulletin of Zoological Nomenclature*. The Executive Secretary reported that the number of applications for Commission rulings and Opinions which had been published remained fairly constant, despite the pressure on the Secretariat caused by work on the proposed new edition of the Code. In the past few years there had been some decrease in the number of subscriptions to the *Bulletin*; although this had been the experience of very many journals it was a matter of concern, since nearly half the income for the support of the Commission's work came from sale of publications, mainly subscriptions to the *Bulletin*.

(d) *Centenary History*. A volume entitled *Towards Stability in the Names of Animals*, written mainly by the late Richard Melville (Commission Secretary from 1968 to 1985), had been published in August 1995 to mark the Commission's centenary. It reviews the contributions of some of those, from Linnaeus onwards, who have attempted to provide a system ensuring that each animal taxon has a unique name which is to be changed only to reflect advances in taxonomic understanding.

(e) *Financial position*. It was reported that the future financial position of the International Trust for Zoological Nomenclature (which exists solely to support the

Commission's work) is very uncertain, and that it will deteriorate unless adequate continuous support is forthcoming from international sources. At present various bodies and individuals give generous and much appreciated help, but except in the very short term this will not suffice to prevent a potentially critical situation. In recent years the annual deficit has been about £5000, despite economies which limit the Commission's efficiency, and the effect of this is cumulative. It was agreed that efforts should be made to ensure long-term support; IUBS might be involved in suitable approaches.

5. *Procedure for election of a Vice-President*

It was agreed, under Bylaw 12b (BZN **34**: 178), that Commissioners Bouchet and Lehtinen would augment the Council to nominate two candidates for election as Vice-President following the completion of Dr Cogger's tenure in December 1997.

6. *Proposed amendments to the Constitution*

Some proposed amendments to the Constitution had been agreed by the Council and had been published in 1995 (BZN **52**: 6–10). The Commission noted that the major ones would be discussed on 19 August at a Session of the Section on Zoological Nomenclature (see BZN **53**: 239–244 for an account of this), and that amendments would subsequently be approved, or otherwise, in a postal vote in the same way as changes to the Code. If approved, and ratified by IUBS, they would be incorporated into the new edition of the Code.

Some minor changes in the wording of the proposed amendments were agreed.

7. *Election of new members of the Commission*

As recorded in para. 4(a) above, ten members had already left the Commission or were about to do so. The present International Congress of Systematic and Evolutionary Biology provided a venue for participation by zoologists in elections to the Commission, and it was agreed that it would be appropriate to fill seven vacancies by a ballot; other vacancies could be filled in subsequent by-elections.

The Commission reviewed the 33 nominations which had been received, having regard to the qualities of the nominees and, in conjunction with the present membership of the Commission, their taxonomic fields of expertise and their geographical locations. Particulars of all the nominees had been circulated to the Commission. It was agreed to present to the Section of Zoological Nomenclature (i.e. all those present at the Congress or the Workshop who considered themselves to be zoologists) a list of 14 candidates. Five candidates were particularly recommended to the Section because their election would avoid deficiencies which would otherwise exist in the scope of the Commission's membership.

The subsequent ballot of the Section is reported below (BZN **53**: 244).

8. *New (Fourth) Edition of the International Code of Zoological Nomenclature*

As agreed at the previous meeting of the Commission (BZN **48**: 291), a Discussion Draft had been prepared (following a meeting of the Editorial Committee in Hamburg in October 1993) and, starting in May 1995, had been widely distributed throughout the world. Very many comments had been received, by post and electronically (see BZN **53**: 145–146 and 240, para. 5); all were circulated to the Editorial Committee and some had been published in the *Bulletin* (BZN **52**: 228–233, 294–302; **53**: 6–17, 80–88).

After assessment of the responses to the Discussion Draft, the Committee had met in Vicenza (Italy) in June 1996 and had reviewed every Article in the Code in the light of the comments by taxonomists and other users of zoological names. The President had circulated a revised draft to the Commission in July; a Report by the Editorial Committee was also circulated.

Guided by the Chairman of the Committee (Prof Ride), members of the Commission present in Budapest discussed the proposed new edition of the Code on 17–18 August, and, following the Workshop on 19 August, again on 22–23 August. By invitation of the President, Dr I.M. Kerzhner (Russia), Dr C.W. Sabrosky (U.S.A.) and Dr F.C. Thompson (U.S.A.) were present for the Commission's discussions of the Code on 18 August and following days, and Prof D.J. Brothers (South Africa) was present on 22 August.

The Commission considered every Article in the proposed Code, although attention was directed primarily at major changes from the current (Third) edition and at points where the Editorial Committee, at their meeting in Vicenza, had recommended significant modifications to the Discussion Draft. Major conclusions reached in discussions on 17–18 August and at the Workshop (Section meeting) on 19 August are summarised in BZN **53**: 242–243.

Further points agreed by the Commission included the following:

(i) a work published after 1998 other than by printing on paper (e.g. on laser disk) would only be available if containing a statement that it was intended for permanent record and that copies printed on paper had been deposited in at least ten named libraries (Art. 8);

(ii) electronic sources (e.g. World Wide Web) from which copies could be obtained on demand would not constitute published work (Art. 9);

(iii) a family-group name published in the period 1931–1960 without description of the taxon would only be available if it had been adopted before 1999 (Art. 13);

(iv) after 1998 the distribution of separates of works published in a serial would not advance the date of publication (Art. 21);

(v) cases of homonymy in existing family-group names resulting from similar names of type genera were to be referred to the Commission (Art. 55);

(vi) while overlooked type species fixations were to be accepted (unless instability was caused, in which case reference to the Commission was necessary), an author finding that the type species of a genus had been misidentified would be able, under specified conditions, to fix as type species either the misidentified nominal species or the taxonomic species actually involved (Art. 70);

(vii) lectotype designations made before 1999 were only to be taken as valid if a particular syntype was unambiguously selected, and the conditions for designations after 1998 were clarified (Art. 74);

(viii) rediscovered original type material would automatically displace a neotype as the name-bearing type (Art. 75).

It was agreed that the Editorial Committee should revise the Glossary, which was an integral part of the Code, to reflect any necessary changes.

The new edition of the Code would initially be published in English and French, with both texts having equal authority (Article 86). The Société Française de Systématique had made a financial contribution (BZN **52**: 292) and the Commission

noted this with gratitude. Dr Bouchet offered to co-ordinate production of the French text, and this was accepted.

It was agreed that the Commission could authorise the publication of the Code in any other languages; if it did so, those official texts would have the same authority as those in English and French (Article 87).

The President proposed that all members of the Commission should be asked in a postal vote to approve the main principles of the Code as had been accepted by the meetings in Budapest. If such approval is given, final editorial corrections (including those necessary to harmonise the English and French texts) would be made. In accordance with the Constitution, the Commission would then be asked, in a second postal vote, to approve publication of the new edition of the Code.

The Officers of IUBS had agreed (see also BZN **53**: 240) that copies of the final text of the proposed Code would be circulated to members of the IUBS Executive after the final vote by the Commission, together with a request that the text be ratified by them as the international body in authority over the Commission.

Subject to approval by the Commission's final vote and ratification by IUBS, it was intended that the Fourth Edition of the Code would be published in 1997 and that its provisions would come into effect on 1 January 1999.

The Commission accepted the procedure proposed by the President.

9. *Proposed 'International Code of Bionomenclature'*

As previously reported (BZN **53**: 148), the International Unions of Biological Sciences and Microbiological Societies (IUBS and IUMS) were proposing that a unified *International Code of Bionomenclature*, or '*BioCode*', might regulate the form and usage of scientific names for all biological taxa which were first published after some future date; names published before that date would be regulated by the relevant existing Codes. [A draft of the *BioCode* has been published in the *Bulletin* (BZN **53**: 148–166)].

The President proposed, and it was agreed, that the Commission should continue to cooperate with this project, but that a commitment to endorse a *BioCode* should not be made at present.

10. *Possible future International Congresses of Zoology*

The President reported a proposal (see BZN **53**: 245–246) from Prof F.D. Por (Jerusalem) and Prof R.M. Polymeni (Athens) that International Congresses of Zoology should be revived; the last full Congress had been held in Washington in 1963, although in 1972 there had been a Congress in Monaco which was largely devoted to administrative winding-up purposes.

The Commission had a discussion of this suggestion, based on correspondence from Prof Por and a leaflet made available in Budapest. It was agreed to respond to Profs Por and Polymeni that the Commission had sympathy with the principle of their proposal to establish a new International Congress of Zoology to foster the status of Zoology as a unified field of science, and to serve as a forum for exchanges of views in diverse areas at present covered by specialised meetings. It was also agreed to communicate to Profs Por and Polymeni the Commission's view that the viability of such a Congress (and its successors) would critically depend on the scientific programme, and on the support it achieved.

If such a Congress were to be held, and it was affiliated with IUBS, the Commission would decide whether to hold a meeting and a Session of the Section of Zoological Nomenclature in conjunction with it. The proposal to initiate a future Congress did not affect the delegation to IUBS of authority over the Commission which had been made by the 1972 Congress.

11. *Conclusion*

In closing the meeting of the Commission, Prof Minelli said that agreement on the principles to be incorporated into the new edition of the Code was a notable achievement. He thanked Commissioners and other participants in the discussions on the Code for their contributions to this.

# I.U.B.S Section of Zoological Nomenclature

## Report of Meeting and Workshop, Budapest, 19 August 1996

Present: Prof A. Minelli (Italy; Chairman) and 43 other biologists, including nine members of the International Commission on Zoological Nomenclature and the Secretary General and Executive Director of the International Union of Biological Sciences (IUBS).

1. The Chairman opened the meeting by welcoming all present. He explained the dual purposes of the meeting, which had been publicised in the Circulars of the V International Congress of Systematic and Evolutionary Biology (ICSEB), the *Bulletin of Zoological Nomenclature*, *Biology International* and elsewhere. These were: (a) a Workshop for public discussion of the principles of the proposed Fourth Edition of the *International Code of Zoological Nomenclature*, and (b) a meeting of the IUBS Section of Zoological Nomenclature. While the main business of the meeting was the Workshop, the session of the Section had the important formal role of considering and, if thought fit, of recommending to the Executive Committee of IUBS that the principles in the proposed edition of the Code and the Constitution of the International Commission on Zoological Nomenclature should be ratified.

2. With the approval of the meeting, Prof Minelli signed the minutes of the previous session (Amsterdam, 6 September 1991) of the Section as a correct record; these minutes had been published in the *Bulletin of Zoological Nomenclature* (BZN **48**: 293–294).

3. The Chairman explained that a secret ballot of members of the Section would be open on 19 and 21–22 August to elect new members of the Commission; the members of the Section consisted of members of the Commission who were present in Budapest and any other persons at ICSEB or the Workshop who considered themselves to be zoologists. Since the previous meeting, two members of the Commission had retired on reaching the age limit of 75 years and two others had resigned; at the end of the present Congress a further six vacancies would arise in accord with the Commission's Constitution. The Commission had concluded that at the present time it would be appropriate for the Section to elect seven new members; 33 nominations for candidature had been received and considered by the Commission, which now presented to the Section a list of 14 candidates to fill the seven vacancies. Five of these candidates were particularly recommended to the Section on the basis of their taxonomic fields of interest and their countries of origin; while the recommendations were not binding on any member of the Section in voting, it was considered that the election of these candidates would result in a membership and balance particularly advantageous to the work of the Commission. [For a report of the ballot see p. 244 below].

4. The Chairman introduced proposed amendments to the Constitution of the Commission. In accordance with Article 82a of the Code, the Constitution could only be amended by the same procedure as the Code itself (i.e. the proposals had to be published, and comments received within one year had to be taken into consideration

before approval by the Commission in a postal vote and ratification by the Executive Committee of IUBS). In the present case proposals to amend a number of Articles had been approved by the Council of the Commission in 1994 and had been circulated to other members. The amendments had been published in full, with detailed explanatory notes, in March 1995 (BZN **52**: 6–11); they had also been forwarded at that time to IUBS, and their publication had been cited in the introduction to the Discussion Draft of the proposed new edition of the Code and elsewhere. No adverse comments on any of the proposals had been received.

Prof Minelli noted that of the proposed amendments to the Constitution two were major: those to Articles 3 and 11. The former provided that after serving for 18 continuous years a Commissioner would not be eligible for re-election until an interval of three years had passed. The amendments to Article 11 provided that the Commission would no longer be required to have a meeting in conjunction with every IUBS General Assembly. Although meetings at Assemblies could still be held, the President would be able to convene meetings at other Congresses (such as ICSEB) which were widely attended by zoologists, subject to the proviso that meetings of the Commission shall be held at intervals not exceeding six years. Prof Minelli emphasized that the status of IUBS as the body in authority over the Commission was not affected by any of the proposed amendments to the Constitution.

In reply to a question from a member of the Section (Dr F.C. Thompson, U.S.A.), the Chairman stated that there were no other proposals for amendments to the Constitution which involved major changes to the Commission's existing status, structure or procedures.

Prof Minelli asked if any member of the Section wished to make observations on proposed amendments to the Constitution; no remarks were made. On a motion proposed from the Chair, the Section then resolved *nem. con.* to recommend to the IUBS Executive Committee that amendments to the Constitution approved by the Commission should be ratified (explicitly including (i) the limitation to 18 years of the uninterrupted term of service of Commissioners [proposed Art. 3b], (ii) the requirement that the Commission must meet at least every six years but not necessarily at every IUBS General Assembly [proposed Art. 11a] and (iii) the abolition of the requirement [present Art. 16a(v)] that amendments to the Code and Constitution be reported to subsequent IUBS General Assemblies). It had already been agreed with the IUBS Officers that the full text of the proposed Constitution (and that of the new Code; see para. 8 below) would be circulated to the IUBS Executive Committee after the definitive postal vote by the Commission had been taken.

5. The Chairman introduced discussion of the proposed Fourth Edition of the *International Code of Zoological Nomenclature*, which was planned to come into effect on 1 January 1999 following publication in 1997. After earlier discussions by the Commission and the Section at meetings in Canberra, Maryland and Amsterdam, the Code Editorial Committee had met in Hamburg in October 1993. Distribution of a Discussion Draft began in May 1995; over 700 paper copies were produced and sent to at least 43 countries, and the text was also available

electronically. More than 500 comments were received; they were sent in batches to the Editorial Committee and some were published in the *Bulletin of Zoological Nomenclature*. The Editorial Committee had met in Vicenza (Italy) from 24–30 June 1996 and had considered every Article in the Discussion Draft in the light of all the comments made by zoologists.

Prof Minelli invited the Chairman of the Code Editorial Committee (Prof W.D.L. Ride, Australia) to explain the steps leading to the adoption and publication of the new Code. Prof Ride outlined the procedures in the present Constitution which had been followed by the Commission and the Section in the case of the current (1985) edition. These procedures were now outdated, and in the Fourth Edition would be amended to bring them into line with present practice, which is:

(a) on request by the Commission, the Editorial Committee prepares a draft incorporating changes and makes it publicly available for discussion, as required under the Code;

(b) following a twelve-month period in which the draft is available for discussion, the Editorial Committee and the Commission meet to consider the proposals and the comments received [in the present case the Committee met in Vicenza in June 1996, as mentioned above, and the Commission was currently meeting in Budapest];

(c) proposed major changes of principle [from the previous text and from the discussion draft] are notified to the Section of Zoological Nomenclature, which is asked to support the principles agreed by the Commission and to recommend to IUBS that the final text which is accepted by the Commission should be ratified;

(d) the Commission votes, initially on major changes of principle and secondly on the complete text incorporating the agreed principles;

(e) IUBS is asked to ratify the Code text as adopted by the Commission.

The Section accepted Prof Ride's explanation without dissent and agreed to proceed on that basis. The Chairman then asked Prof Ride to guide the discussion of the proposed new edition of the Code.

6. Prof Ride drew attention to the copies of a Report by the Editorial Committee which were in the hands of members of the Workshop and Section; they also had copies of Articles 23 and 78–80 of the draft as amended in Vicenza. The Report summarized the recommended administrative procedures leading to the adoption of the Fourth Edition of the Code and major proposed nomenclatural changes to the current Code. Proposals which involved substantial changes from the current Code were indicated in the Report in some detail, together with the Editorial Committee's reasons for putting them forward. Prof Ride said that some further changes had been made by the Commission meeting during the previous two days in Budapest, and that he would draw attention to the significant ones. The Report mentioned Code Articles in which the Editorial Committee did not recommend changes previously supported by the Commission or Section. The Report did not draw specific attention to proposed changes which were essentially of an editorial nature to improve presentation and comprehension; Prof Ride emphasized, however, that all proposals were open for discussion, either in the meeting or subsequently with members of the Code Editorial Committee or Commission.

7. Prof Ride then led the meeting through the Report of the Editorial Committee and some of the proposals to which it referred. Matters mentioned during the meeting included:

(a) *Article 1 (scope of the Code)*

Scientific names of taxa above the family group were incorporated, but only to the extent that they must be uninominal and latinized, and be published in or after 1758.

Zoological genus-group names published after 1998 which are identical to generic names already published for botanical or microbiological taxa were to be treated as junior homonyms of those names. In discussion, it was pointed out that at present names for protistan taxa presented difficulties with homonymy, but it was thought that these could be overcome. It was noted that the *Index Nominum Genericorum (Plantarum)* contained 8784 names which were homonyms of zoological genus-group names, but it was not proposed that these existing homonymies be eliminated. Members of the Section pointed out that the imminent provision of comprehensive and accessible lists of generic names would facilitate the avoidance of future inter-kingdom homonymies.

(b) *Article 8 (publication to determine availability)*

The Editorial Committee had concluded that the proposal in the Discussion Draft which required that new names must be registered in *Zoological Record* was not generally acceptable, and that availability must be determined by criteria of publication. Publication of new names in durable unalterable media which are not readable by eye (such as CD-ROM) should only be acceptable under specified conditions, and electronic networks were not regarded as publications.

(c) *Article 16 (fixation of type specimens)*

It was proposed that after 1998 new species-group names would only be available if holotypes or syntypes were explicitly fixed in the original publication. If the types were preserved specimens (which was not always possible) they would have to be deposited in named and publicly accessible museums or similar institutions.

(d) *Article 23 (reversal of precedence under specified conditions)*

The Code draft proposed that a name which met stringent criteria of wide, universal and sustained use should automatically take precedence over an unused or long disused older synonym or homonym. The Commission considered that in such cases the senior name should not take precedence if it had remained unused since 1899. If the criteria were not met there might still be a case for retaining the junior name in the interest of stability, but the matter would have to be referred to the Commission for resolution under the plenary power.

(e) *Articles 30 and 31 (agreement in gender in combinations)*

The Editorial Committee had concluded that the proposal in the Discussion Draft to abandon grammatical gender agreement in species names (binomina) was not generally acceptable to zoologists, and that it should not now be pursued.

(f) *Article 42 (trace fossil genera)*

It was proposed that new genus-group names for trace fossils (ichnotaxa) should only be available if type species were fixed, as was already the case for other genus-group names.

(g) *Articles 78, 79 and 80 (power to adopt parts of a List of Available Names in Zoology, and the status of Listed Names)*

Prof P.H.A. Sneath (U.K.) noted that in bacteriology names only had status in nomenclature (i.e. were only available) if they were on an officially adopted List (or, in the case of new names, were registered by publication in the *Journal of Systematic Bacteriology*). The dates, authorship and typification of the named taxa were deemed to be as stated in the List or as registered.

Prof Ride stated that the Discussion Draft of the zoological Code contained enabling provisions so that the Commission could adopt Parts of a *List of Available Names in Zoology*. A Part would relate to a particular taxonomic field and names published in a specified period of time, and would be proposed by an international body of zoologists dealing with that taxonomic field. The List would be intended to include all known names within its scope, not only those used as valid. Adoption could only take place after processes of wide consultation; once a Part had been adopted the listed particulars relating to a name (date, authorship, typification of the nominal taxon) would be deemed to be definitive. The Discussion Draft had proposed that a name which fell within the scope of an adopted Part of the List would be available only it were recorded in the List; this would be analogous to the practice in bacteriology. The Editorial Committee meeting in Vicenza had recommended that names not in a relevant adopted Part of the List would remain available but the Listed names would have precedence over them.

The Workshop and Section discussed the two alternatives mentioned above (names not in a relevant adopted Part of the List to be deemed either (i) not available or (ii) not to have precedence over Listed names).

Dr C. Nielsen (Denmark) proposed, and Prof W.J. Bock (U.S.A.) seconded, a motion that the Fourth Edition of the Code should prescribe the first alternative, i.e. that names which fell within the scope (taxonomic field, time span) of an adopted Part of the *List of Available Names in Zoology* but which were not in the List should be deemed to be not available. The Chairman put this motion to a vote by the Section, and it was carried *nem. con.*

8. Prof Ride proposed, and Dr C. Nielsen seconded, a motion that the Section should support the principles that had been put forward for the planned Fourth Edition of the Code, and should recommend to the Executive Committee of IUBS that the final text approved by postal vote of the Commission (subject to editorial improvements of details) should be ratified. The final text would be submitted to the IUBS Executive Committee for ratification (as with the Constitution; see para. 4 above). The motion was carried *nem. con.*

9. The Chairman thanked Prof Ride for presenting the Report of the Editorial Committee and for guiding the discussion on the draft of the Code.

10. There was some discussion of the nomenclature of ambiregnal taxa, i.e. those which had been, or might be, treated under more than one Code. Such treatment sometimes led to more than one name for the same taxonomic concept, each correct under a particular Code. Two alternatives were (i) for it to be left to individual workers which Code to follow, or (ii) for appropriate taxa to be treated under the provisions of a particular Code, to which they would be assigned for nomenclatural purposes only and without taxonomic implications. It was agreed that wide consultations would be necessary to resolve the nomenclatural issues involving ambiregnal organisms.

11. By invitation of Prof Minelli, Mrs J. Thorne (Biosis, U.K.) described the procedures which were currently used in the preparation of *Zoological Record*. She emphasisised that the publishers (Biosis International) were a not-for-profit company, and that a facility was being developed by which the recording (or otherwise) of a taxon name could be checked on the World Wide Web free of charge. This is the Index to Organism Names, part of the *Taxonomy Resource and Index to Organism Names* (*'TRITON'*). A demonstration was already available. Mrs Thorne said that the assistance of workers was sought in order to make the *Record* as complete and timely as possible.

12. As Chairman, Prof Minelli asked if anybody wished to raise further business: none did. After thanking all those who had attended the Workshop and Section meeting he closed the session, and declared open the ballot for election of seven new members of the International Commission on Zoological Nomenclature.

**Report of the ballot for election of new members of the International Commission on Zoological Nomenclature**

The ballot was open to members of the Section of Zoological Nomenclature on 19 and 21 22 August 1996. The votes were counted by Prof A. Minelli (President of the Commission) and Commissioners W.J. Bock and D. Heppell. Fifty-nine members of the Section voted, and the following zoologists were elected as members of the Commission: Prof D.J. Brothers (South Africa), Dr W.N. Eschmeyer (U.S.A.), Dr I.M. Kerzhner (Russia), Prof S.F. Mawatari (Japan), Dr L. Papp (Hungary), Prof D.J. Patterson (Australia) and Prof Da-xiang Song (China).

# Call for a new International Congress of Zoology

F.D. Por

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We seek the response of zoologists concerning the feasibility of a new International Congress of Zoology, possibly to be convened in Athens in 1999 or 2000.

The first International Congress of Zoology was held in Paris in 1889. It was suggested at the XVI Congress in Washington (1963) that the Congresses should be discontinued because Zoology had split into many specialized and unrelated fields, and the last Congress (Monaco, 1972) was largely administrative in nature. It was hoped that the International Congresses of Systematic and Evolutionary Biology (ICSEB) would replace the defunct Zoological Congresses at a higher integrative level, but after several meetings of ICSEB this has not proved to be the case. There has been a general depreciation of Zoology in the academic world, and the replacement of this discipline by a plethora of more fashionable topics. Meanwhile, International Botanical Congresses have continued without interruption.

The widely circulated 'Systematics Agenda 2000' emphasizes our present incapacity even to scientifically describe a zoological biodiversity which appears to be an order of magnitude greater than was envisaged 25 years ago. A critically depleted and weakened community of zoological systematics cannot rise to the task of investigating, and helping to protect, the heritage of the animal world.

On the positive side, there are many advances of the last three decades which need to be appreciated by an international forum of all zoologists. Confined to the pages of strictly specialized journals, these important developments often do not reach the attention of those in other zoological fields. In the case of more classical zoology, it would be useful to acquaint colleagues in other fields with the more recently discovered animal phyla and classes, the new concepts of vertebrate evolution, the biology of clonal animals, present views on the Protista, and so on. A sample of subjects of wider implications might include sociobiology, cladistics, molecular taxonomy, modern embryology, the Cambrian 'revolution', vicariance zoogeography, in and ex situ conservation. This is a different Zoology from that of the 1960s.

We are ready to try and promote a Congress which would reflect the rich and unifying aspects of Zoology, and which would reassert its general global, human and philosophical role. We hope for the approval and support of the zoological diaspora, and seek suggestions regarding the themes and structure of the proposed Congress. Even more, we need personal commitments to help by organizing symposia and workshops. It will be necessary, even at an early stage, to establish an active and representative Action Committee. Understandably, we shall be able to appeal for funding only after having obtained convincing public support and after having in place a sufficiently prestigious Committee.

Those who are interested in the idea of launching a new International Congress of Zoology are invited to contact Dr Rosa Polymeni, Department of Zoology, University of Athens, 15784 Athens, Greece (fax +–30–1–7284604, e-mail rpolime@atlas.uoa.gr).

# Origins of the terms Cephalopod, Cephalopoda and Gastropoda, and early subdivisions of the Mollusca

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**Abstract.** The French vernacular term céphalopode originated with Cuvier in 1795, along with gastéropode and acéphale. It was adopted in English as cephalopode (1811) and cephalopod (1826). The formal terms Cephalopoda, Acephala and Gasteropoda date from an English translation (Cuvier, 1802). Early classifications of Cuvier and Lamarck are discussed.

**Keywords.** Nomenclature; taxonomy; Mollusca; Acephala; Brachiopoda; cephalopod; Cephalopoda; gastropod; Gastropoda; Pteropoda.

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## *Introduction*

Although the names of Orders and other suprafamilial taxa are not governed by the *International Code of Zoological Nomenclature* they are of critical importance for zoological nomenclature and their history is of interest. It is the purpose of this note to trace the origin of the name Cephalopoda and other early subdivisions of Mollusca.

The origin of the nominal taxon Cephalopoda has been placed as far back as 1784 (Salvini-Plawen, 1980, p. 271, citing Schneider, 1784). Jeletzky (1966, p. 11) cites Cuvier (1794). Most other authorities in the present century attribute Cephalopoda to Cuvier and give the year as either 1797 (Engeser, 1990) or 1798 (Naef, 1921; Clarke & Trueman, 1988).

Although Schneider (1784) may have been the first to offer a logical classification of the Cephalopoda, he used the name Octopodia for all the dibranchiate cephalopods. The term Octopodia was probably taken from Linnaeus's use as a species (*Sepia octopodia*, 1758, p. 658). The words cephalopod or Cephalopoda do not occur in Schneider's article.

Schneider divided his Octopodia into two classes, which he did not name:

Classis I. Pedes octoni breves, promuscides binae; venter pinnatus, ossiculum dorsi.

Classis II. Pedes octoni longi basi palmati, absque promuscidibus, pinnis et osse dorsali.

Classis I included *Sepia*, *Loligo*, *Teuthis* and *Sepiola*, Classis II included *Polypus*, *Moschites*, *Nautilus* and *Pompilus*. These were referred to in German as 'Arten', a word now used for species, but also used in a more general sense by earlier German writers. The present writer regards these names as genera, but a different interpretation was placed upon them by Hemming (1954), who concluded that *Octopodia* was a generic name and that the eight subdivisions were species of that genus. The

Commission suppressed *Octopodia* (as a genus-group name) and the other eight names from Schneider (whether as genera or species) in Opinion 233 (1954).

### *G.L.C.F.D. Cuvier*

By the end of the eighteenth century Linnaeus's (1758) subdivision of all invertebrates into Insecta and Vermes was clearly inadequate. 'Vermes: Testacea' included most of the shelled bivalves and gastropods, but also *Argonauta* and *Nautilus*, besides chitons and barnacles. 'Vermes: Mollusca' included *Sepia* and members of several other phyla, including the echinoderms.

The basis of modern classification was laid by Cuvier (1795a), who replaced 'Vermes' by six classes. The term 'Mollusques' was retained for one of these and now corresponded more closely with our modern idea of the group.

In a second paper published in the same year Cuvier (1795b) divided his Classe Mollusques into three Orders: Céphalopodes, Gastéropodes and Acéphales. Céphalopodes were defined as molluscs with a free head supporting an arm crown and including 'les seiches, que je divise en seiches [i.e. cuttlefish] et en poulpes [i.e. octopus].' Cuvier thought that *Clio* (an opisthobranch gastropod) probably belonged to the group but wrote that as he had not dissected one he could not be certain. *Clio* was later excluded (Cuvier, 1799). The term 'céphalopode' was coined from the Greek words for head and foot because of the use of the arms on the head for locomotion ('... grands tentacules sur lequels ils marchent'), presumably referring to *Octopus*. Gastéropodes had a free head, two or four small tentacles, and crawled on a muscular ventral foot; the name was derived from the last feature. Cuvier included here the modern gastropods and also flukes, planarians and some protochordates (myxines). Acéphales, without head, eyes or 'ears', included tunicates, barnacles and brachiopods as well as the modern Bivalvia.

The recent comprehensive bibliography of Cuvier's writings (Smith, 1993) does not list any publications by Cuvier in 1794, and only three before 1795. These, all in 1792, were on 'Cloportes' (i.e. woodlice), *Patella* and Diptera, and do not include reference to cephalopods. Jeletzky's assignment of Cephalopoda to Cuvier (1794) therefore appears to be an error.

Attributions of the name Cephalopoda to Cuvier (1797) or (1798) refer to that author's *Tableau élémentaire de l'histoire naturelle des animaux*. The reason for the uncertainty as to the year is that Cuvier's work was dated only 'An 6' [Year 6] according to the French Republican Calendar. An 6 lasted from 22 September 1797 until 21 September 1798 (Holland, 1910). Most bibliographies and library catalogues, including that of the Natural History Museum, London, interpret this as 1798. Smith (1993, record 772) has '[1797/1798?]'. However, a copy in the library of the Natural History Museum has a MS note on the title page which refers to 'Bibl. Franç. Ann 1 no xi, p. 81'. This is the *Bibliographie de la France*, which reviewed Cuvier's book in no. xi, issued on 24 December 1797. The date of publication was therefore between 22 September and 24 December 1797.

The year of publication of the 'Tableau' is of importance for generic authorship, because it gives priority to Cuvier for the genus *Octopus* in 1797 over Lamarck, 1798, as correctly stated by Guerra & Alonso-Zarazaga (1995).

As originally conceived 'Céphalopodes' comprised only the subdivision later named Dibranchiata (Owen, 1832), and now generally referred to as Coleoidea (Bather, 1888). The same subdivision of molluscs was used in Cuvier's 'Tableau' (1797) as in 1795, and the definition of 'Céphalopodes' was also the same. However, the scope of the group was now extended to include forms with an external shell: *Nautilus*, the fossil ammonites and orthoceratites. Cuvier also included a third group of fossils, 'Camérines', these in fact being Foraminifera.

Cuvier's inclusion of *Nautilus* in his céphalopodes followed Linnaeus (1758, p. 709), who after *Nautilus* had written 'Animal *Sepia*?' and cited Rumpf (1705), who had figured the soft parts. By 1797 Céphalopodes comprised the modern group as then known, with the addition of some Foraminifera.

Cuvier (1804) introduced the new order ptéropodes for certain molluscs without an external shell, including *Clio*. In the first volume of his *Leçons d'anatomie comparée* (1800) Cuvier had retained the three subdivisions of molluscs which he had set up in 1795. In the third and fourth volumes (1805a,b) he employed ptéropodes and added the new term brachiopodes (for the térébratules and lingulées), these still being classified as 'mollusques acéphales'.

### *J.B.P.A. de M. de Lamarck*

While Cuvier's classification of the Mollusca was founded primarily on the soft parts, Lamarck (1792) had explicitly rejected this approach, arguing that, since the animals which inhabited them were known only for a small fraction of shells, the majority of shells in collections would remain indeterminate. His first classification (Lamarck, 1799) was therefore Linnaean. In the order Testacées, 'Coquilles univalves uniloculaires' included *Argonauta* as well as modern gastropods, while 'Coquilles univalves multiloculaires' included *Nautilus*, *Spirula*, *Belemnites* and several more fossil genera. 'Coquilles bivalves' and 'coquilles multivalves' each included a wide range of organisms. Lamarck (1799) did not use the term 'céphalopodes', or Cuvier's other subdivisions of 1795.

Two years later Lamarck (1801) made a concession to Cuvier's approach, making his primary division into Mollusques céphalés and Mollusques acéphalés. This enabled him to include the forms without obvious shells, the squids and octopuses which had been Cuvier's original céphalopodes. 'Mollusques céphalés nus' included *Sepia*, *Loligo* and *Octopus* but also some opisthobranch gastropods, and 'Mollusques céphalés conchilifères' included the ectocochleate cephalopods and most of the shell-bearing gastropods. Within this group, 'Coquilles univalves multiloculaires' included *Nautilus*, *Spirula*, ammonites, belemnites, and Foraminifera. Mollusques acéphalés were similarly divided into naked (i.e. the tunicates) and shell-bearing forms, the latter including brachiopods and cirripedes as well as the modern Bivalvia.

In later works Lamarck (1804; 1809) adopted Cuvier's groups brachiopodes, céphalopodes, gastéropodes and ptéropodes.

### *Later History*

Cuvier, Lamarck and other French authors continued to state their classifications in the vernacular, using latinised generic names without formalising the names of higher categories. 'Cephalopoda' as a formal latinised term first appears in the

English translation (*Lectures on comparative anatomy*, 1802, p. 428, folding table v) of Cuvier's *Leçons* of 1800. The *Oxford English Dictionary* gives the year 1802, with the reference 'Medical Journal VIII, 372', which in fact is a review (Anon.) of the English translation (Cuvier, 1802) by William Ross of Cuvier (1800). The formal terms Gasteropoda [sic] and Acephala are used in the English translation. Brachiopoda and Pteropoda were latinised from brachiopodes and ptéropodes by Duméril (1806). A detailed account of the history of the classification of the Gastropoda is given by Cox (1960).

Foraminifera were excluded from the Cephalopoda in the 1802 English translation of Cuvier (1800), but they continued to be included by French authors until Dujardin (1835) examined the soft parts of living Foraminifera and showed that they could not be classed with the Mollusca.

For the English vernacular 'cephalopod' and 'gasteropod' the earliest usage cited by the *Oxford English Dictionary* is 1826 (Kirby & Spence, 1826, p. 235). Parkinson (1811, p. 99) had used the spelling cephalopode and (1811, p. 165) wrote of 'bivalve shells, the dwellings of acephalous molluscae'.

The terms Brachiopoda, Cephalopoda, Gast(e)ropoda and Pteropoda have retained general currency. Acephala, though used by some nineteenth century authors, has not found general acceptance. Cox (1969, p. N3) found that no less than thirteen different names had been used for the bivalve molluscs, and used the Linnaean name Bivalvia (Linnaeus, 1758, p. 645) in accord with other recent works of reference (e.g. Franc, 1960).

**Acknowledgements**

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## Case 2987

# *Geopeltis* Regteren Altena, 1949, *Geoteuthis* Münster, 1843, *Jeletzkyteuthis* Doyle, 1990, *Loligosepia* Quenstedt, 1839, *Parabelopeltis* Naef, 1921, *Paraplesioteuthis* Naef, 1921 and *Belemnoteuthis montefiorei* Buckman, 1880 (Mollusca, Coleoidea): proposed conservation

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**Abstract.** The purpose of this application is to conserve the names of six genera and one species of Jurassic coleoid cephalopods. The six generic names are threatened by the generic name *Belemnosepia*, a name first used by Agassiz in 1835 but made available by Buckland & Agassiz in 1836. The first person to refer species to *Belemnosepia* was d'Orbigny (1846), and six of these are now the type species of *Geopeltis* Regteren Altena, 1949, *Geoteuthis* Münster, 1843, *Jeletzkyteuthis* Doyle, 1990, *Loligosepia* Quenstedt, 1839, *Parabelopeltis* Naef, 1921 and *Paraplesioteuthis* Naef, 1921. The name *Belemnosepia* has not been used for over 60 years, and in the 19th century was used in senses different from the original; it is proposed that this name should be suppressed. It is also proposed that the specific name of *Belemnoteuthis montefiorei* Buckman, 1880 should be conserved by suppression of its senior synonym *Orthoceras belemnitoeides* Buckland, 1830.

**Keywords.** Nomenclature; taxonomy; Cephalopoda; Coleoidea; Jurassic; *Belemnosepia*; *Geopeltis*; *Geoteuthis*; *Jeletzkyteuthis*; *Loligosepia*; *Parabelopeltis*; *Paraplesioteuthis*; *Belemnoteuthis montefiorei*.

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1. The generic name *Belemnosepia* appears in the literature with various authors and publication dates. These are: Agassiz (1835) — given as author in d'Orbigny (1846), Gray (1849), Bronn & Roemer (1851–52), Giebel (1852a, 1852b) and Chénu (1859); Buckland & Agassiz (1835 and 1836) — given as authors in Geinitz (1846) and Fischer (1882); Agassiz in Buckland (1839) — given as author in Agassiz (1846) and Bronn (1848); Buckland (1835 and 1836) — given as author in Naef (1921b) and Neave (1939).

2. We shall first elucidate the history, authorship and date of publication of *Belemnosepia*. Agassiz (1835) stated that, following a visit to the Philpot Collection at Lyme Regis, England, he had made an important discovery regarding belemnites, namely that the 'sogenannte *Onychoteuthis prisca* mit Dintensäcken' [the so-called

*Onychoteuthis prisca* with ink sacs] of Zieten (1832, pl. 25) was really only the anterior part of a belemnite. In point of fact, the name *Onychoteuthis prisca* was not used for these fossils by Zieten. Agassiz was referring to *Onychoteuthis prisca* Münster, 1828. However, the reference to Zieten (pl. 25) shows that he was confusing fossil gladiuses with the pro-ostraca of belemnoid cephalopods. He then wrote: 'Die Belemniten unterscheiden sich daher von den Sepien hauptsächlich durch die auffallend grössere Entwicklung des Spitzchens am oberen Rande der sogenannten Sepien-Knochen' [The belemnites therefore differ from the sepiids chiefly through the strikingly greater development of the little spine at the upper margin of the so-called cuttlebone]. It was for this reason that he coined the name *Belemnosepia* for the fossils, although this name does not appear in his brief communication. However, he probably communicated the name *Belemnosepia* to Buckland during his visit to England in October 1834. Agassiz later (1846, p. 11) recorded *Belemnosepia* as 'Agassiz in Buckland, 1839', presumably referring to the German translation (Buckland, 1839) of Buckland (1836b) which he had edited. It is evident from the context that this name was applied by Agassiz to a supposed animal which combined the features of a belemnite with those of a different fossil. Thus Agassiz in 1835 initiated the confusion which is apparent in Buckland (1836b) published a year later. The name *Belemnosepia* (written 'Belemno-Sepia') first appears in a report of a talk given by Buckland at a convention of German naturalists and physicians held in Bonn in 1835 (Anon., 1835, p. 627). The original text reads 'Buckland hielt einen Vortrag über ein neues Genus von fossilen Cephalopoden, das er *Belemno-Sepia* genannt hat, und über die Dintensäcke, welche im Innern der Belemniten-Stacheln gefunden wurden' [Buckland gave a lecture about a new genus of fossil cephalopods that he called *Belemno-Sepia* and about ink sacs which have been found in the interior of the belemnite thorns]. No description or figure was given, nor an indication to such a description or figure, nor is a species name mentioned. The name is a nomen nudum. Later, a description was published by Buckland (1836a), although no figure was given and no species name mentioned. He wrote (p. 39): '... ein Geschlecht in der Klasse der Cephalopoden ..., für welches ich mit Agassiz den Namen *Belemnosepia* vorschlagen möchte' [... a genus in the class Cephalopoda ..., for which I would like to propose in concurrence with Agassiz the name *Belemnosepia*]. The phrase 'in concurrence with' makes it clear that it was Agassiz who had named the taxon and, under Article 50a of the Code, authorship is established as Buckland & Agassiz in Buckland (1836). From the description it is clear that Buckland (1836a) was referring to fossil remains from the Lower Liassic of the Dorset coast near Lyme Regis. He had earlier (1830a, p. 23) described these remains under the name *Orthoceras belemnitoeides*. A review of his paper was published later that year (Buckland, 1830b, p. 511) in which the name was spelt *belemnitoides*; this was an incorrect subsequent spelling and under Article 33c of the Code is unavailable. Buckman (1880, p. 141) later named these remains *Belemnoteuthis montefiorei*; these are the forms described as unnamed Phragmoteuthida by Donovan (1977, pp. 21–22). The name *Orthoceras belemnitoeides* Buckland, 1830 has not been used for very many years, and *Belemnoteuthis montefiorei* is currently used to refer to these remains (e.g. Rietschel, 1977, p. 124; Phillips, 1982, p. 72; Engeser & Clarke, 1988, p. 141; eight further references by five further authors are held by the Secretariat). We propose that the name *montefiorei* Buckman, 1880 be conserved by suppression of *Orthoceras*

*belemnitoeides* Buckland, 1830. Buckland (1836b, p. 374) mentioned the name *Belemnosepia* when describing fossil ink sacs of coleoids whose systematic position had not previously been clear. Plate 44' of this work bears the heading 'illustrations of the Genus *Belemnosepia*'; this includes figure 1 'Imaginary restoration of *Belemnosepia*' showing a belemnite rostrum. Plate 44'' is titled 'ink bags of *Belemnosepia* in their nacreous sheaths, from the Lias of Lyme Regis'. In the explanation of plate 44'', figs. 1 and 2 are stated to be 'anterior sheath and ink-bag of *Belemno-sepia*' and fig. 3 to be '*Belemno-sepia* from the Lias at Lyme, in the Oxford Museum; the ink-bag is preserved entire within the anterior conical sheath'. All the specimens on this plate are recognizable as *Belemnoteuthis montefiorei*.

3. However, Buckland confused the issue by referring also to two belemnite rostra which had been found associated with ink sacs (Buckland, 1836b, pl. 44', figs. 7, 9) named in the explanation of the plates (Buckland, 1836b, vol. 2, p. 69) as *Belemnites ovalis* and *B. pistilliformis*? respectively. It is now thought that *Belemnoteuthis montefiorei* and *Belemnites* belong to different orders, Phragmoteuthida and Belemnitida respectively. *Belemnites* was a valid generic name at that time although it has been suppressed in Opinion 1721 (1993).

4. For the arguments that follow it is necessary to note that Buckland (1836b) clearly distinguished between 'fossil pens of *Loligo* from the Lias of Lyme Regis' (pls. 28–30), which are fossils now referred to the genera *Geopeltis* and *Loligosepia*, and the fossil ink sacs and belemnite rostra which he included in *Belemnosepia*. *Belemnosepia*, as originally conceived by Agassiz and by Buckland, was based on a reconstruction of a fossil coleoid under the erroneous assumption that *Belemnites* (fossil coleoid cephalopods possessing a pro-ostracum, phragmocone and rostrum) was congeneric with other forms (i.e. *Belemnoteuthis montefiorei*) which did not possess a rostrum. Buckland (1836b, p. 374, footnote) wrote: 'Each of these specimens contains an ink bag within the anterior portion of the sheath of a perfect Belemnite; and we are henceforth enabled with certainty to refer all species of *Belemnites* to a family [genus in modern terminology] in the class of Cephalopods, for which I would, in concurrence with M. Agassiz propose the name *Belemno-sepia*'. It is clear from Buckland (1836a, p. 39, text quoted above) that Buckland intended to use *Belemnosepia* as a new generic name. Buckland implied that the taxon *Belemnosepia* was to include all ink-sac-bearing belemnites.

5. Buckland (1836a, 1836b) did not include any nominal species in the new genus *Belemnosepia*. In accordance with Article 67g(ii) of the Code the type species must be chosen from among the nominal species first referred to the genus by a subsequent author, even though the unnamed specimens in pl. 44'' of Buckland (1836b) are recognizable as *Belemnoteuthis montefiorei*. Species were first referred to *Belemnosepia* by d'Orbigny (1846, pp. 433–441) and were: *Loligo bollensis* Zieten, 1832 (recte Schübler in Zieten, 1832); *Geoteuthis lata* Münster, 1843; *G. sagittata* Münster, 1843; *G. orbignyana* Münster, 1843; *G. speciosa* Münster, 1843; *G. obconica* Münster, 1843; *G. hastata* Münster, 1843; *G. flexuosa* Münster, 1843 and *Teudopsis agassizii* Eudes-Deslongchamps, 1835. These species represent a number of taxa which are now placed in six different genera (see para. 6 below). They do not, however, include any species that had been placed in *Belemnites* or the fossils that were later named *Belemnoteuthis montefiorei*.

6. D'Orbigny (1850) restricted the use of the generic name *Belemnosepia* to *Geoteuthis lata* Münster, 1843, placing in *Belopeltis* Voltz, 1840 the eight other species which he had listed as *Belemnosepia* in 1846. However, the *Table alphabétique* (p. 24) of the same work maintained his earlier position, listing all nine species as *Belemnosepia*, and omitting *Belopeltis*. Gray (1849), Pictet (1854), Chénu (1859) and Keferstein (1862–66) also used the name in a much broader sense. Fischer (1882, p. 354) mentioned only 'plusieurs espèces du Lias supérieur du Würtemberg, du Calvados, de Lyme Regis; et de l'Oxfordien de Chippenham'. Naef (1921b, p. 47) accepted *Belemnosepia* and even proposed a new family BELEMNOSEPIIDAE (p. 47). On p. 143 he wrote: 'Belemnosepiidae (p. 47). Hierher Formen vom Typus des *Belopeltis simplex* Voltz (= *Geoteuthis lata* Münster = *Belemnosepia lata* Orb. etc.) ... [Belemnosepiidae. Here forms of the type of *Belopeltis simplex* Voltz (= *Geoteuthis lata* Münster = *Belemnosepia lata* Orb. etc.)]. According to Article 67 of the Code 'the term 'designation' in relation to fixation of a type species of a genus must be rigidly construed'. Since Naef used the plural (Formen = forms) this cannot be regarded as the fixation of a type species of *Belemnosepia*. He apparently wanted to include more species which looked like *Belopeltis simplex* Voltz, but he did not state that *Belopeltis simplex* Voltz is definitely the type species. Both generic and family names were discarded in a supplement (compare also Naef, 1922). In 1922 Naef described *Belemnosepia* and *Palaeosepia* Theodori, 1844 as 'unnötige Bezeichnungen für das angenommene Belemnitentier' [unnecessary designations for the supposed belemnite animal]. No type species has ever been validly designated for *Belemnosepia*. Six of the species attributed to *Belemnosepia* by d'Orbigny are type species or subjective synonyms of the type species of other genera, as follows:

***Geopeltis*** Regteren Altena, 1949 (p. 56), type species by original designation *Belopeltis simplex* Voltz, 1840 (p. 23, pl. 2, fig. 1). *Geoteuthis lata* Münster, 1843 (p. 71) and *G. orbignyana* Münster, 1843 (p. 72) are widely regarded as junior subjective synonyms of the type species (see Engeser, 1988, p. 8).

***Geoteuthis*** Münster, 1843 (p. 68), type species by subsequent designation by Bülow-Trummer (1920, p. 252) *Loligo bollensis* Schübler in Zieten, 1832 (p. 34). *Loligo bollensis* is widely regarded (see Engeser, 1988, p. 8) as a subjective synonym of *L. aalensis* and on this view *Geoteuthis* is a junior subjective synonym of *Loligosepia*.

***Jeletzkyteuthis*** Doyle, 1990 (p. 198), type species by original designation *Teudopsis agassizii* Eudes-Deslongchamps, 1835 (p. 72). Doyle stated that his name *Jeletzkyteuthis* was a replacement name for *Loliginites* Quenstedt, 1849 (p. 497). However, the latter name was applied by Quenstedt to fossils which he believed to belong to the Recent genus *Loligo*; accordingly, it is available only for the purposes of homonymy (Article 20 of the Code) and cannot be replaced in the sense of Articles 13a(iii) and 67h. It should be noted that *T. agassizii* has been widely regarded as a senior synonym of *Loliginites coriaceus* Quenstedt, 1849 (p. 512), (e.g. by Engeser, 1988; Doyle, 1990), although Guérin-Franiatte & Gouspy (1993) regard *T. agassizii* as a nomen dubium.

***Loligosepia*** Quenstedt, 1839 (p. 163), type species by subsequent designation by Regteren Altena (1949, p. 58) *Loligo aalensis* Schübler in Zieten, 1832, p. 34, a probable subjective synonym of *Loligo bollensis* Schübler in Zieten, 1832, p. 34 (see under *Geoteuthis* above).

***Parabelopeltis*** Naef, 1921a (p. 534), type species by monotypy (p. 539) *Geoteuthis flexuosa* Münster, 1843 (p. 75).

***Paraplesioteuthis*** Naef, 1921a (p. 534), type species by monotypy and original designation (p. 539) *Geoteuthis sagittata* Münster, 1843 (p. 72).

A type species designation for *Belemnosepia* of the type species of any of these six genera would invalidate a generic name which is in current use or which could be used by anyone dissenting from its synonymy with others. Designation of any of the other nominal species included by d'Orbigny (1846) would also cause confusion. The forthcoming Coleoidea volume of the *Treatise on Invertebrate Paleontology* will list as valid or potentially valid the six nominal genera *Geopeltis*, *Geoteuthis*, *Jeletzkyteuthis*, *Loligosepia*, *Parabelopeltis* and *Paraplesioteuthis*, although recognising that *Geoteuthis* and *Loligosepia* are generally recognized as subjective synonyms. However, the limited use of these names in recent years is inadequate to meet the criteria of Article 79c of the Code for a prima facie case that stability is threatened by the availability of *Belemnosepia*.

7. Probably the last author to use *Belemnosepia* as a valid name was Dreyfuss (1935) who, apparently unaware of Naef (1922), argued that *Belemnosepia* was the earliest available name for *Geoteuthis* Münster, 1843, which is a younger subjective synonym of *Loligosepia* Quenstedt, 1839 (see Doyle, Donovan & Nixon, 1994, p. 10). Jeletzky (1966) in a preliminary revision of fossil Coleoidea for the *Treatise on Invertebrate Paleontology* did not index the name *Belemnosepia*. No major systematic works (e.g. Wagner, 1860; Naef, 1922; Jeletzky, 1966; Engeser, 1988) have used the name *Belemnosepia* as valid. Riegraf (1995, p. 141) listed *Belemnosepia* as a subjective synonym of *Loligosepia* Quenstedt, 1839 and cited, with an asterisk indicating type species, '*B. lata* Graf zu Münster, 1837'. However, Münster (1837a, p. 252) did not mention this combination; in a brief report of a meeting he listed *Onychoteuthis* from the lithographic limestone of Eichstadt, including *O. lata*. He mentioned *Belemnosepia* only to remark that it was an association of belemnite rostra with *Onychoteuthis*. The same statement, slightly expanded, is found in Münster (1837b, col. 478) where it is made clear that he was referring to an accidental association of belemnites with *Onychoteuthis*. In both 1837 papers *O. lata* was a nomen nudum. Riegraf's citation is not a valid type species designation because the combination *Belemnosepia lata* did not exist and, if it was intended to refer to *O. lata*, this name was not then available.

8. Engeser (1988, pp. 8–9) described the problems detailed above and referred to *Belemnosepia* as a nomen dubium, suggesting that the Commission be asked for a ruling. Suppression of the name *Belemnosepia* is desirable for the following reasons:

(a) confusion surrounds the original proposal of *Belemnosepia*;

(b) it has been used by later authors in senses different from those of Buckland & Agassiz in Buckland (1836);

(c) it has not been used as a valid name in the last sixty years;

(d) the name has been rejected by major revisers;

(e) any eligible designation of a type species would displace a generic name in use or potentially valid.

9. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the following names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:

(a) the generic name *Belemnosepia* Buckland & Agassiz in Buckland, 1836;
(b) the specific name *belemnitoeides* Buckland, 1830, as published in the binomen *Orthoceras belemnitoeides*;

(2) to place the following names on the Official List of Generic Names in Zoology:
(a) *Geopeltis* Regteren Altena, 1949 (gender: feminine), type species by original designation *Belopeltis simplex* Voltz, 1840;
(b) *Geoteuthis* Münster, 1843 (gender: feminine), type species by subsequent designation by Bülow-Trummer (1920) *Loligo bollensis* Schübler in Zieten, 1832;
(c) *Jeletzkyteuthis* Doyle, 1990 (gender: feminine), type species by original designation *Teudopsis agassizii* Eudes-Deslongchamps, 1835;
(d) *Loligosepia* Quenstedt, 1839 (gender: feminine), type species by subsequent designation by Regteren Altena (1949) *Loligo aalensis* Schübler in Zieten, 1832;
(e) *Parabelopeltis* Naef, 1921 (gender: feminine), type species by monotypy *Geoteuthis flexuosa*, Münster, 1843;
(f) *Paraplesioteuthis* Naef, 1921 (gender: feminine), type species by original designation and monotypy *Geoteuthis sagittata* Münster, 1843;

(3) to place the following names on the Official List of Specific Names in Zoology:
(a) *simplex* Voltz, 1840, as published in the binomen *Belopeltis simplex* (specific name of the type species of *Geopeltis* Regteren Altena, 1949);
(b) *bollensis* Schübler in Zieten, 1832, as published in the binomen *Loligo bollensis* (specific name of the type species of *Geoteuthis* Münster, 1843);
(c) *agassizii* Eudes-Deslongchamps, 1835, as published in the binomen *Teudopsis agassizii* (specific name of the type species of *Jeletzkyteuthis* Doyle, 1990);
(d) *aalensis* Schübler in Zieten, 1832, as published in the binomen *Loligo aalensis* (specific name of the type species of *Loligosepia* Quenstedt, 1839);
(e) *flexuosa* Münster, 1843, as published in the binomen *Geoteuthis flexuosa* (specific name of the type species of *Parabelopeltis* Naef, 1921);
(f) *sagittata* Münster, 1843, as published in the binomen *Geoteuthis sagittata* (specific name of the type species of *Paraplesioteuthis* Naef, 1921);
(g) *montefiorei* Buckman, 1880, as published in the binomen *Belemnoteuthis montefiorei*;

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Belemnosepia* Buckland & Agassiz in Buckland, 1836, as suppressed in (1)(a) above;

(5) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *belemnitoeides* Buckland, 1830, as published in the binomen *Orthoceras belemnitoeides* and as suppressed in (1)(b) above;

(6) to place on the Official Index of Rejected and Invalid Family-Group names in Zoology the name BELEMNOSEPIIDAE Naef, 1921 (invalid because the name of the type genus has been suppressed in (1)(a) above).

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## Case 2950

# *Pseudofoenus* Kieffer, 1902 (Insecta, Hymenoptera): proposed designation of *Foenus unguiculatus* Westwood, 1841 as the type species

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**Abstract.** The purpose of this application is the designation of *Foenus unguiculatus* Westwood, 1841 as the type species of the New Zealand parasitic wasp genus *Pseudofoenus* Kieffer, 1902 (family GASTERUPTIIDAE). At present the nominal species *Gasteruption pedunculatum* Schletterer, 1889 is the type, but the original male specimen of this lacks the diagnostic genitalia and its name is a junior synonym of either *F. unguiculatus* or *F. crassipes* Smith, 1876. The uncertainty would not be resolved by neotype designation because both the latter nominal species are typified by females and the sexes of the *Pseudofoenus* species have not yet been correlated.

**Keywords.** Nomenclature; taxonomy; Hymenoptera; GASTERUPTIIDAE; parasitic wasps; *Pseudofoenus*; *Pseudofoenus unguiculatus*; New Zealand.

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1. The genus *Pseudofoenus* was described by Kieffer (1902, p. 6), who associated with it three nominal species of GASTERUPTIIDAE from New Zealand: *Foenus unguiculatus* Westwood, 1841 (p. 537), *F. unguicularis* Smith, 1876 (p. 480) and *Gasteruption pedunculatum* Schletterer, 1889 (p. 466). The first two were cited as 'species douteuses' so, as mentioned by Crosskey (1962, p. 392), *G. pedunculatum* is the type species by monotypy (Article 67g of the Code). Numerous species from outside New Zealand were later placed in *Pseudofoenus*, but Crosskey (1962, pp. 378, 398) restricted the genus to five nominal species from New Zealand, those listed above and also *Foenus crassipes* Smith, 1876 (p. 479) and *P. nocticolor* Kieffer, 1911 (p. 183). The *Pseudofoenus* species are apparently parasitic or predator-inquilines in the nests of colletid bees.

2. A recent revision (Jennings & Austin, 1994) of *Pseudofoenus* concluded that there are only two morphologically distinct taxonomic species. Both are known from many specimens from throughout New Zealand and can be distinguished in both sexes by the form of the hind tarsi in females and by the genitalia in males. However, no characters or observations are known at present by which males can be associated with females, and Jennings & Austin therefore treated the sexes separately (i.e. as four nominal species). The lack of sexual correlation leads to nomenclatural

difficulties since, of the five nominal species mentioned above, the types of *P. unguiculatus*, *P. unguicularis* and *P. crassipes* are females and those of *P. pedunculatus* and *P. nocticolor* are males.

3. Schletterer (1889, p. 468) stated that there was type material of *Gasteruption pedunculatum* (the type species of *Pseudofoenus*, see above) in the Natural History Museums of Berlin and of Zurich (collection now in the Swiss Federal Institute of Technology); however, there is no evidence of a specimen having been deposited in Zurich (B. Merz, pers. comm.). Institutions which received Schletterer specimens of other species have either been visited personally by J.T.J. or contacted by correspondence and no *G. pedunculatum* material has been found. The only surviving Schletterer specimen is no. 21874 in the Museum für Naturkunde, Humboldt Universität, Berlin; this lacks the entire metasoma (abdomen), and so the name cannot be assigned to either of the currently recognized taxonomic species and is in effect a nomen dubium. It would be possible to designate a male specimen of the second taxonomic species (i.e. that not conspecific with the undamaged male holotype of *P. nocticolor* Kieffer, 1911) as neotype of *G. pedunculatum*, and Jennings & Austin (1994, p. 1293) suggested this course. However, the name *pedunculatum* Schletterer, 1889 must be invalid since it is a synonym of either *unguiculatus* Westwood, 1841 (of which *unguicularis* Smith, 1876 is a synonym) or of *crassipes* Smith, 1876, both denoting older nominal species typified by females, and it will be displaced by one or other as a result of future information on the relationship between the sexes. The same applies to the name of *P. nocticolor* Kieffer, 1911. Various authors and cataloguers (Schletterer, 1889; Froggatt, 1891; Dalla Torre, 1902; Valentine & Walker, 1991) have variously synonymised *Pseudofoenus* specific names without examining the relevant type specimens and sometimes without consideration of the priority of names.

4. As reported in Jennings & Austin (1994, p. 1293), one of us (J.T.J.) has located a female specimen in the Hope Entomological Collections, University of Oxford, which was mentioned by Westwood as the depository of his specimen(s) of *Foenus unguiculatus*. This is labelled '*Foenus unguiculatus* Westw.' in Westwood's handwriting; Westwood believed it to be male but was mistaken in this (and in the locality 'Nova Hollandia' published in 1841, which he later doubted (1843, p. 259)). Since Westwood mentioned only 'male' in his descriptions of the species in 1841 and 1843 and there are no other specimens in Oxford we assume that this is the holotype. The provenances and present locations of numerous other female specimens are given by Jennings & Austin (1994, p. 1294). Since *Foenus unguiculatus* Westwood, 1841 is the oldest nominal species placed in *Pseudofoenus* its specific name is not only applicable to a taxon but will inevitably remain valid, while *pedunculatus* meets neither of these criteria. We therefore propose that *F. unguiculatus* be designated as the type species.

5. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to set aside all previous fixations of type species for the nominal genus *Pseudofoenus* Kieffer, 1902 and to designate *Foenus unguiculatus* Westwood, 1841 as the type species;

(2) to place on the Official List of Generic Names in Zoology the name *Pseudofoenus* Kieffer, 1902 (gender: masculine), type species *Foenus unguiculatus* Westwood, 1841 by the designation in (1) above;

(3) to place on the Official List of Specific names in Zoology the name *unguiculatus* Westwood, 1841, as published in the binomen *Foenus unguiculatus* (specific name of the type species of *Pseudofoenus* Kieffer, 1902).

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## Case 3007

# *Trematospira* Hall, 1859 (Brachiopoda): proposed designation of *Spirifer multistriatus* Hall, 1857 as the type species

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**Abstract.** The purpose of this application is to conserve the Lower Devonian brachiopod name *Trematospira* Hall, 1859 in its accustomed usage. Hall's publication was delayed and meanwhile the name was made available in 1858 by Davidson, who attributed authorship to Hall, with *Spirifer perforatus* Hall, 1857 as the type species by monotypy. Hall & Clarke (1893) designated *Spirifer multistriatus* Hall, 1857 as the type species, and this designation is almost universally accepted and should be conserved.

**Keywords.** Nomenclature; taxonomy; Brachiopoda; Lower Devonian; North America; *Trematospira*; *Trematospira multistriatus*.

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1. The results of investigations made by James Hall during the years 1855 to 1858 were 'communicated, in part or entirely, at different times, to the Albany Institute; to the Reports of the Regents of the University on the State Collections of Natural History, for the years 1856 and 1858; to the American Association for the Advancement of Science' (Hall, 1859a, p. 7). These results were printed in the third volume of the *Palaeontology of the State of New York*. This volume, although 'printed, in the years 1857 and 1858' suffered a long delay in publication (see Hall, 1867, footnote on p. 271). So long was the delay that Hall tried to overcome the problem by publishing the results of his investigations, including descriptions of new genera, in the *Twelfth Annual Report on the State Cabinet* (Hall, 1859a), which appeared before, although in the same year as, the third volume of the *Palaeontology of the State of New York* (Hall, 1859b).

2. One of the new genera published by Hall was *Trematospira* (Hall, 1859a, p. 27), after which Hall added the words '(Hall, 1857)' although the name was not mentioned in any of his papers published in 1857. Species included in *Trematospira* by Hall were *Spirifer perforatus* Hall, 1857 (p. 59), *Spirifer multistriatus* Hall, 1857 (p. 59), *Trematospira costata* Hall, 1859, *T. simplex* Hall, 1859 and *Atrypa camura* Hall, 1852. When the third volume of the *Palaeontology of the State of New York* was published later in 1859 the name was written (Hall, 1859b, p. 207) '*Trematospira* (n.g.)'.

3. In his study of the genera and subgenera of Brachiopoda having spiralia, Davidson (1858, p. 412) included 'Sub-genus *Trematospira*, Hall, *T. perforata* Hall'. Although he did not describe *Trematospira* in detail, the inclusion of an existing species is adequate to make the generic name *Trematospira* available with *T. perforata* as type species by monotypy. Although Hall did not publish the name *Trematospira* until 1859, it is clear that his ideas had already reached Davidson, who

in 1858 explicitly attributed authorship to him; under Article 50a of the Code authorship of *Trematospira* is Hall in Davidson, 1858. In his *Monograph of the British Fossil Brachiopoda*, Davidson (1882, p. 82) referred to '*Trematospira* Hall, 1857', but never discussed or described the taxon, which occurs only in North America. He referred to '*S. multiplicata*' as the type of *Trematospira*, but gave no author; since Hall never included a species of that name in *Trematospira* it is likely that *multiplicata* was an error for *multistriatus*.

4. Hall & Clarke (1893, p. 124) described '*Trematospira* Hall, 1859' and (p. 126) gave *Spirifer multistriatus* Hall as its type species, giving as reason for their choice 'it is better known and of more frequent occurrence' than *T. perforata* 'which was the first in the descriptive list'.

5. *Spirifer multistriatus* was adopted as type species of *Trematospira* in the first edition of the *Treatise on Invertebrate Paleontology* by Boucot, Johnson & Staton (1965, p. H652) and is taken as such by virtually all authors (e.g. Likharev, Makridin, Nikiforova & Rzhonsnitkaia, 1960, p. 285; Norris, 1964, p. 63; Grunt, 1986, p. 151; a further nine references by a further 16 authors using *Trematospira* in this sense are held by the Commission Secretariat). The only recent exception of which I am aware is Feldman (1994, p. 29) who gave *Trematospira gibbosa* Hall as type species. However, *T. gibbosa* was not made available until Hall, 1860 (p. 82) and was not originally included in *Trematospira*, which was established in 1859; as such, *T. gibbosa* cannot be accepted as a valid type species. It is intended to give *Spirifer multistriatus* as the type species of *Trematospira* in the forthcoming second edition of the *Treatise*.

6. To maintain the generally accepted concept of *Trematospira* I propose that *Spirifer multistriatus* Hall, 1857 be accepted as its type species and that its authorship be attributed to Hall, 1859.

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers:
  (a) to suppress the name *Trematospira* Hall in Davidson, 1858 and all uses of the name prior to the publication of *Trematospira* Hall, 1859 for the purposes of both the Principle of Priority and the Principle of Homonymy;
  (b) to set aside all fixations of type species for the nominal genus *Trematospira* Hall, 1859 prior to the designation by Hall & Clarke (1893) of *Spirifer multistriatus* Hall, 1857;

(2) to place on the Official List of Generic Names in Zoology the name *Trematospira* Hall, 1859 (gender: feminine), type species by subsequent designation by Hall & Clarke (1893) *Spirifer multistriatus* Hall, 1857;

(3) to place on the Official List of Specific Names in Zoology the name *multistriatus* Hall, 1857, as published in the binomen *Spirifer multistriatus* (specific name of the type species of *Trematospira* Hall, 1859);

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Trematospira* Hall in Davidson, 1858, as suppressed in 1(a) above.

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## Case 3016

## *Gladiolites geinitzianus* Barrande, 1850 (currently *Retiolites geinitzianus*; Graptolithina): proposed designation of a neotype

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**Abstract.** The purpose of this application is to conserve the Silurian graptolite name *Retiolites geinitzianus* (Barrande, 1850) in its accustomed usage. In 1944 Bouček & Münch designated as lectotype one of Barrande's type specimens, which is too fragmentary to assign with certainty to *Retiolites geinitzianus*. It is proposed that a specimen corresponding with the present usage of *R. geinitzianus* be designated as the neotype.

**Keywords.** Nomenclature; taxonomy; Graptolithina; Silurian; *Retiolites geinitzianus*.

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1. Barrande (1850) established a new graptolite genus *Gladiolites* (p. 68) and described a new species, *Gladiolites Geinitzianus* (p. 69, pl. 4, figs. 16–33). In a footnote on p. 68, he wrote: 'Si l'affinité entre le nom générique *Gladiolites* et *Gladiolus* désignant une plante, pouvait fair élever quelque objection contre le premier, nous proposerions de lui substituer celui de *Retiolites*'. The substitute name *Retiolites* was used by virtually all subsequent authors, and in 1954 the Commission (Opinion 199) suppressed the name *Gladiolites* in order to conserve *Retiolites*, with *Gladiolites geinitzianus* as its type species.

2. Assignment of a specimen to one of the species of *Retiolites* is difficult unless the specimen is complete. The presence of the proximal end is important for identification purposes, particularly since one of the primary means of distinguishing between *Retiolites* species is by measuring the dorso-ventral width at a specified distance from the proximal end (see Berry & Murphy, 1975, pp. 98 99; Bjerreskov, 1975, pp. 38–39).

3. Bouček & Münch (1944, p. 37) designated as lectotype of *Retiolites geinitzianus* the specimen figured by Barrande, 1850, p. 4, figs. 17 -19. We have examined this specimen (L27600 in the National Museum, Prague, from the locality Prague-Vyskočilka). It is a short mesial fragment, with a dorso-ventral width more typical of specimens which would now be assigned to *R. angustidens* Elles & Wood, 1908, but is too small a fragment for confident assignment to this or any other species of *Retiolites*.

4. We have examined the remainder of Barrande's collection in the National Museum, Prague. The only other *Retiolites* specimens present are those that were figured by Barrande (1850) as pl. 4, figs. 16, 20 32; the specimen figured in pl. 4, fig. 33 is missing. Of the specimens present, L27602 (fig. 16) and L30063 (figs. 28–32) would now be assigned to *R. angustidens*; L30059 (figs. 20 23) was recognised by Bouček & Münch (1944, p. 45) to be *Stomatograptus grandis* (Suess, 1851); L30062 (figs. 24–25) is an obliquely preserved distal fragment probably, but by no means certainly, of *R. geinitzianus* as currently understood; and L30064 (figs. 26–27) is a poorly preserved fragment in subscalariform view and of uncertain specific identity. Thus Barrande's collection contains no specimen which can be identified unequivocally as *R. geinitzianus* in the sense of current usage.

5. To select L27602 or L30063 as replacement lectotype of *R. geinitzianus* would result in the nominal species *R. angustidens* Elles & Wood, 1908 (p. 338) becoming a junior synonym of *R. geinitzianus*. To select L30059 as replacement lectotype would result in *Stomatograptus grandis* (Suess, 1851, p. 99) becoming a junior synonym of *R. geinitzianus*. Both *R. angustidens* and *Stomatograptus grandis* have been used consistently and internationally, the latter being a biozonal index species in central Europe (see, for example, Bouček, 1953; Štorch, 1994). To select L30062 or 30064 as replacement lectotype of *R. geinitzianus* would offer no advantage over the existing lectotype since none of these specimens is sufficiently complete to offer a basis for the differentiation of *R. geinitzianus* from the other species of *Retiolites*.

6. Bouček & Münch (1944, pl. 3, figs. 2–4) figured a specimen of *R. geinitzianus* (L31612 in the National Museum, Prague) from the lower Wenlock of Prague-Vyskočilka, Bohemia, the same locality from which the lectotype selected by Bouček & Münch (see para. 3 above) came.

7. It is desirable that the widely used name *R. geinitzianus* (Barrande, 1850) should continue to be used for this distinctive and widespread species. We therefore propose that specimen L31612, figured by Bouček & Münch (1944) be designated as neotype of *R. geinitzianus*.

8. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to set aside all previous fixations of type specimens for the nominal species *Gladiolites geinitzianus* Barrande, 1850 and to designate as neotype the specimen L31612 in the National Museum, Prague;

(2) to emend the entry on the Official List of Specific Names in Zoology for the name *geinitzianus* Barrande, 1850, as published in the binomen *Gladiolites geinitzianus*, to record its establishment on p. 69 (not p. 68) and that it is defined by the neotype designated in (1) above.

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## Case 2994

## *Nothosaurus* Münster, 1834 (Reptilia, Sauropterygia): proposed precedence over *Conchiosaurus* Meyer, [1833]

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**Abstract.** The purpose of this application is to conserve the well known generic name *Nothosaurus* Münster, 1834 for a genus of sauropterygian reptiles by giving it precedence over the subjective synonym *Conchiosaurus* Meyer, [1833], which predates it by a few months. The genus *Nothosaurus* is known from the upper Lower to uppermost Middle Triassic of Europe and the Middle East. The type species, *N. mirabilis* Münster, 1834, was first described on material from the lower Upper Muschelkalk (Late Anisian) at Bayreuth. The genus *Conchiosaurus* is known from a single incomplete skull from the Saurierkalk of Esperstädt (Germany), which corresponds to the base of the Middle Muschelkalk, Upper Anisian.

**Keywords.** Nomenclature; taxonomy; Reptilia; Sauropterygia; Lower-Middle Triassic; *Nothosaurus*; *Conchiosaurus*.

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1. Meyer ([1833], p. 8, pl. 1, figs. 3 and 4) established the new nominal genus and species *Conchiosaurus clavatus*, based on a single, incomplete and badly crushed skull from the Triassic Saurierkalk, which corresponds to the base of the Middle Muschelkalk, Upper Anisian, at Esperstädt, Germany. The specimen, catalogue no. AS I 1446, is housed in the Bayerische Staatssammlung für Paläontologie und Historische Geologie in Munich. The date 1833 is given on the wrapper of *Museum Senckenbergianum*, Band 1, Heft 1 (pp. 1–96, pls. 1–5), in which Meyer's paper was included (pp. 8–14), whilst 1834 is given on the front page of the Heft. The accepted dates of publication of the *Museum Senckenbergianum* were set out by Stearn (1938, p. 155); that for Band 1, Heft 1 was given as '1833 (probably October)'.

2. In 1834 Münster (p. 525) proposed a new nominal genus and species *Nothosaurus mirabilis*, based on an articulated but incomplete skeleton and a tooth-bearing fragment of a lower jaw from the lower Upper Muschelkalk at Bayreuth, Germany. This specimen, catalogue no. BT 1000, is housed in the Oberfränkisches Erdgeschichtliches Museum in Bayreuth. Münster (p. 526) mentioned Meyer's ([1833]) taxon but considered his to be distinct.

3. In a revision of *Conchiosaurus clavatus*, Meyer (1855, p. 107) recognised the similarity between *Conchiosaurus* and *Nothosaurus*, noting (in translation) 'should the two genera concur, I would retain the name *Nothosaurus* although it is younger,

because it has been widely accepted in the meantime'. Thus the author himself of *Conchiosaurus* gave precedence to Münster's name *Nothosaurus*.

4. The name *Conchiosaurus* was used as valid by a number of authors who emphasized the genus's affinities with *Simosaurus* Meyer, 1842 (see, for example, Quenstedt, [1851], p. 135; Zittel, 1889, p. 484). Following Quenstedt and Zittel, Huene (1948, 1956) listed the genus *Conchiosaurus* within the family SIMOSAURIDAE. The only information that Huene (1956, p. 412) gave in his description of *Conchiosaurus* is that (in translation) 'the palate, dentition and form of the skull are similar to *Simosaurus*'; he gave no reference to fossil material and relied only on the work of previous authors. Tatarinov & Novoshilov (1964) included *Conchiosaurus* in their list of the SIMOSAURIDAE. Like Huene, they made no reference to fossil material. Huene (1956) and Tatarinov & Novoshilov (1964) believed *Nothosaurus* to be a distinct taxon (see para. 5 below). Lydekker (1889) also retained names for both *Conchiosaurus* and *Nothosaurus*, believing the two taxa to be closely allied.

5. Following Meyer's (1855) suggestion (para. 3), most authors have adopted *Nothosaurus* as a valid generic name, among them Edinger (1921), Arthaber (1924), Schmidt (1928), Kuhn (1934, 1964), Huene (1956), Romer (1956, 1966), Tatarinov & Novoshilov (1964) and Carroll (1988). Sanz (1984) used the name *Conchiosaurus* but considered the two taxa to be most likely congeneric; he cited *Conchiosaurus* with the date 1842 and used the family-group name NOTHOSAURIDAE, apparently (and erroneously) believing the name *Nothosaurus* to have priority.

6. Kuhn (1934) used *Nothosaurus* as a valid name. Later he (Kuhn, 1964) revived the genus *Conchiosaurus*, suggesting that if *Conchiosaurus* and *Nothosaurus* were synonyms, the latter name would have to be conserved.

7. In their review of the genus *Nothosaurus*, Rieppel & Wild (1996) recognize the 'unequivocal' synonymy of *Nothosaurus* and *Conchiosaurus*. They acknowledge the latter as the senior synonym but use *Nothosaurus* as the valid name. In addition to the authors cited in para. 5 above, a list of more than 40 references from the last 50 years, in which the name *Nothosaurus* has been used as valid, has been given to the Commission Secretariat. The name *Conchiosaurus*, in contrast, has remained relatively unused and we propose that *Nothosaurus* be given precedence over it.

8. The validity of the species *Conchiosaurus clavatus* Meyer, [1833] is a difficult problem. The single specimen of the taxon is diagnostic at generic level, but not at specific level. A case could be made, on the basis of the specimen's overall size and its geographic and stratigraphic occurrence, for the name *clavatus* to be considered a senior synonym of *Nothosaurus marchicus*, but Rieppel & Wild (1996) chose to treat the species name as a nomen dubium.

9. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to give precedence to the name *Nothosaurus* Münster, 1834 over the name *Conchiosaurus* Meyer, [1833] whenever the two are considered to be synonyms;

(2) to place on the Official List of Generic Names in Zoology the following names:
   (a) *Nothosaurus* Münster, 1834 (gender: masculine), type species by monotypy *Nothosaurus mirabilis* Münster, 1834, with the endorsement that it is to be given precedence over *Conchiosaurus* Meyer, [1833] whenever the two names are considered to be synonyms;

(b) *Conchiosaurus* Meyer, [1833] (gender: masculine), type species by monotypy *Conchiosaurus clavatus* Meyer, [1833], with the endorsement that it is not to be given priority over *Nothosaurus* Münster, 1834 whenever the two names are considered to be synonyms;

(3) to place on the Official List of Specific Names in Zoology the following names:
(a) *mirabilis* Münster, 1834, as published in the binomen *Nothosaurus mirabilis* (specific name of the type species of *Nothosaurus* Münster, 1834);
(b) *clavatus* Meyer, [1833], as published in the binomen *Conchiosaurus clavatus* (specific name of the type species of *Conchiosaurus* Meyer, [1833]).

**Acknowledgements**

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**Comments on the proposed suppression for nomenclatural purposes of S.D. Kaicher's *Card Catalogue of World-Wide Shells* (1973–1992)**
(Case 2964; see BZN **53**: 96–98)

(1) Y. Finet
*Département des Invertébrés, Muséum d'Histoire Naturelle, P.O. Box 6434, CH-1211 Genève 6, Switzerland*

I support Kabat's proposal for the suppression for nomenclatural purposes of Sally Diana Kaicher's *Card Catalogue of World-Wide Shells*.

Mrs Kaicher contacted me once to get pictures of and information on Lamarck's type material of OLIVIDAE (housed in the Muséum d'Histoire Naturelle of Geneva) when she was preparing a new card pack on this family. I provided her with the most detailed information available, but unfortunately never saw the relevant information on this type material incorporated in her work.

As a research worker on the marine mollusks of the eastern Pacific, I wish to point out that for many gastropod species her cards may show type designations (sometimes inadvertent) or erroneous statements about type material, and that it would be a burden to check all her cards; her series is incomplete in many libraries and many of her cards are out of print.

(2) M.G. Harasewych & R.E. Petit
*National Museum of Natural History, Smithsonian Institution, Washington, D.C. 20560, U.S.A.*

We are writing to express strong opposition to the application to suppress Kaicher's *Card Catalogue of World-Wide Shells* for nomenclatural purposes on the grounds: (1) that the arguments for suppression are contrived and entirely without basis, and (2) that suppression of this publication would do more to obfuscate than to resolve the underlying cause for the petition, namely the designation of lectotypes of species described by W.H. Dall.

While the format of Kaicher's *Card Catalogue* is atypical of serial publications, the original petition does not dispute that it meets all criteria for publication (Articles 7–9 of the Code). Neither the taxonomic coverage, the address of the business office, nor a questionable inference of the purpose of this publication have the remotest bearing on the issue. Otherwise, many publications, including Berry's *Leaflets in Malacology*, would have to be rejected on this basis.

Kaicher's *Card Catalogue* has been catalogued by the Smithsonian Libraries, and quite possibly by other libraries. According to the cover sheet accompanying Card Pack 57, 20% of the subscribers were museums and universities. In any event, is the availability of a work for taxonomic purposes to be determined by librarians?

Kaicher made special efforts to illustrate species that had not been figured before (or in some cases since), often figuring their type specimens, thereby making the cards a valuable resource to researchers.

The reason given for the petition to suppress Kaicher's publications is the inclusion therein of 'inadvertent' type designations for Dall taxa. The four examples of problems cited in the original petition are trivial. The ilustrated specimen of

*Nassarius scissuratus* (Dall) has, in fact, been easily recognized and is now segregated (USNM 86988). The outright error in attributing type status to a specimen of *Ptychosalpinx globulus* (Dall) that was not a syntype has no lasting nomenclatural consequences, is easily rectified, and was probably due to a labeling error at the Museum of Comparative Zoology. The specimen illustrated as 'holotype' of *Admete microscopica* (with a typographical error in one digit of the catalog number) is, in fact, the specimen that Dall (1902, pl. 9, fig. 4) illustrated as this species without attributing type status to it, and would be the logical choice for a lectotype should the need to designate one be brought about by suppressing Kaicher's 'inadvertent' designation. The original description of *Terebra acrior* (Dall, 1889, p. 66) restricts the taxon to Antillean specimens, and refers to Antillean specimens in the plural. Kaicher illustrates the only specimen from the only Antillean locality given by Dall that can now be found.

At the heart of the issue are problems with the status of type specimens of numerous taxa proposed by Dall. While Dall generally based species descriptions on individual specimens that may or may not have been illustrated, in many cases he did not specifically identify a holotype, making all specimens mentioned in the original description syntypes by default (Article 72). For a substantial portion of the marine taxa that Dall described on the basis of specimens collected by the U.S. Coast Survey Steamer *Blake*, some of the syntypes were deposited in the collections of the National Museum of Natural History, Smithsonian Institution (USNM), while others were catalogued in the collections of the Museum of Comparative Zoology.

Prior to World War II, type specimens at USNM were housed in the general collections, as they still are in many natural history museums today. During World War II, Drs Harald Rehder and Joseph P.E. Morrison, then curators in the Department of Invertebrate Zoology, removed type material from the general collections for safe storage in Luray, Virginia. These curators had, in most instances, selected one lot per species, even when other syntype lots were present in the collection. A cursory survey (M.G.H.), confirmed by Rehder (personal communication), revealed that illustrated specimens or specimens best conforming to the published descriptions were the ones selected for safekeeping.

When the specimens were returned to USNM after the war, they were segregated as a separate 'Type Collection', which was subsequently inventoried. Numerous workers, among them Kaicher, visited the USNM collections and photographed specimens housed in the type collection. In cases in which the catalogued lot selected for the move to Luray contained a single specimen and was labeled 'type', these researchers inferred the specimen to be a holotype and attached this epithet to their figure. The publication of a figure of a syntype with the word 'type' or 'holotype' amounts to a lectotype designation (Article 74b), even when inadvertent. A similar situation existed for workers utilizing the collections of the MCZ where museum labels on some syntype material did not indicate that additional syntypes were at the USNM (e.g. Vokes, 1988).

Such type designations were not uncommon, occurring both before (e.g. Bartsch, 1911; Henderson, 1920; Oldroyd, 1927) and after (e.g. Keen, 1971; Bouchet & Warén, 1985; Abbott & Dance, 1982) the segregation of the USNM type collection, and were certainly not restricted to Kaicher. Some 'inadvertent' lectotype designations published by Kaicher were repeated by later authors. Were Kaicher's cards to be suppressed, researchers would be faced with, depending on taxon, the attribution of

inadvertent type designation to a subsequent author, formulating a petition to suppress the work of that author for nomenclatural purposes, or re-examining all of the original syntypes, housed in two museums, in order to repeat the process of lectotype selection. We regard the actions of Rehder and Morrison as constituting the actual selections of 'lectotypes' for the species in question, although not formalized by a published statement of such action. Our brief survey and the work of previous researchers have confirmed that they had selected either figured specimens or specimens that can be recognized from the published descriptions or measurements whenever possible. Suppressing Kaicher would, for many taxa, require that their work be repeated, taking into account MCZ specimens, a tedious and pointless exercise that would result in identical conclusions in the vast majority of cases.

In conclusion, the availability of Kaicher's *Card Catalogue of World-Wide Shells* for nomenclatural purposes is clearly not ambiguous. The overwhelming majority of the statements made by Kaicher concerning the type status of specimens merely serve to publish and fix the careful selections by Rehder and Morrison, making a duplication of their efforts unnecessary. Similar 'inadvertent' lectotype designations made by other authors should either be allowed to stand, or be evaluated in the course of systematic revisions on a taxon by taxon basis.

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(3) P. Bouchet

*Muséum National d'Histoire Naturelle, 55 Rue Buffon, 75005 Paris, France*

I write in support of the application by Dr Kabat. The MNHN malacology department library has a set of the *Card Catalogue* published by Ms Sally Kaicher, and I have personally corresponded with the author in the 1980s when she photographed a number of MNHN type specimens. As pointed out in the

application, it had never been Kaicher's intention to actually designate lectotypes in her card-packs and I had never considered the *Card Catalogue* to be a likely place to scan for lectotype designations and other nomenclatural acts. Further, Kabat demonstrates the curatorial consequences of these inadequate designations, if they were regarded as nomenclaturally valid. Placing the *Card Catalogue* on the Official Index has a smack of censorship on an otherwise valuable identification tool, but regrettably there is no alternative. I approve the application.

(4) A.G. Beu

*Institute of Geological & Nuclear Sciences, P.O. Box 30368, Lower Hutt, New Zealand*

In my area of expertise I had quite a lot to do with Mrs Kaicher's card-packs and supplied the illustrations for several species. I am very aware that Mrs Kaicher had no intention of proposing any changes to nomenclature or new type designations, and any that appear on her cards are quite accidental. I am unable to discover any such unintended new type designations in the packs of cards illustrating RANELLIDAE and BURSIDAE, and feel that the number involved is quite small. However, it is entirely appropriate and within the spirit of Kaicher's intentions for the Commission to suppress these card-packs for nomenclatural purposes. I support Kabat's application for the suppression of this *Card Catalogue*.

(5) A.J. Kohn

*Department of Zoology, University of Washington, Seattle, Washington 98195–1800, U.S.A.*

I support the proposed suppression for nomenclatural purposes of S.D. Kaicher's *Card Catalogue of World-Wide Shells*. My primary basis is the author's intent. As Dr Kabat points out, 'there is no specific indication' that the purpose was 'providing a permanent scientific record' (Article 8a of the Code). Moreover, although I do not have it in writing, I asked Ms Kaicher personally some time in the mid- or late-1980s to characterize the purpose of her card-packs because of this problem. She responded that their purpose was as Kabat has stated in paragraph 3 of his application, and that they were not intended as scientific record.

The matter that occasioned my direct query of Ms Kaicher was a problem additional to those Kabat raises. I had received two inquiries concerning new species names of other authors that existed only as manuscript names but that Kaicher listed in her card-packs. Here the questions were, are these names available, and if so is Kaicher the author because a brief description and figure(s) appeared on the card? That is, did Kaicher's cards make such names available? Ms Kaicher assured me that it was not her intent to publish new species names in her card-packs. I also recall discussing the matter with the then Secretary of the Commission (R.V. Melville), who was also of the opinion that these names were not available.

(6) T. Schiøtte

*Invertebrate Department, Zoological Museum, University of Copenhagen, Universitetsparken 15, DK-2100 Copenhagen Ø, Denmark*

I fully support Kabat's proposal to suppress Kaicher's *Card Catalogue* for nomenclatural purposes. The main argument I would see against suppression would be that the *Card Catalogue* is not a true publication and especially that it was not intended to establish a permanent scientific record. However, that is, as already pointed out by Kabat, something that may be regarded differently by different researchers. Therefore, and especially in order not to have a number of inappropriate lectotypes selected by inference of holotype, I urge the Commission to use its powers to suppress the *Card Catalogue* for nomenclatural purposes.

**Comment on the proposed conservation of the generic name *Glomeris* Latreille, 1802 (Diplopoda) and the specific name of *Armadillo vulgaris* Latreille, 1804 (Crustacea, Isopoda), and the application for a ruling on the status of the name *Armadillo* Latreille, 1802 (Crustacea, Isopoda)**
(Case 2909; see BZN **52**: 236–244; **53**: 120–122)

Pekka T. Lehtinen
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Reading the comments on the application to solve the problem of the name *Armadillo* Latreille, 1802 I have the impression that the complicated history was not carefully studied by those commenting (BZN **53**: 120–122). In this case we are not dealing with a simple situation of a much-used younger name and a less-used older name, but with the synonymy of names for two taxa that are now placed in different families.

I agree that the name *Armadillo* Latreille, 1802 has been much used in the sense of Brandt ([1831]) for a group of woodlice in the family ARMADILLIDAE Brandt in Brandt & Ratzeburg, [1831]. However, *Armadillo* Latreille is actually a subjective synonym of *Armadillidium* Brandt, [1831] (family ARMADILLIDIIDAE Brandt, 1833) (para. 12 of the application), since Latreille's (1802) and (1804) description of *Armadillo* was based solely on specimens that are now called *Armadillidium vulgare* (Latreille, 1804). The proposed (para. 14) type species *Armadillo officinalis* Duméril, 1816 belongs in Brandt's family ARMADILLIDAE (see paras. 9 and 12 of the application), but was not originally included and possibly not known to Latreille.

In placing *Armadillidium* on the Official List in 1928 (Opinion 104) with the type species '*vulgare* Latreille, 1804, *armadillo* Linnaeus, 1758' the Commission accepted that *Armadillidium* was based on the original concept of *Armadillo*. *Armadillidium* was withdrawn from the List in 1958 following recognition of unused earlier synonyms of *vulgare* and *armadillo* as composite (para. 2 of the application).

I willingly support most suggestions to stabilize names which have been much used, but the acceptance of two synonyms (*Armadillo* and *Armadillidium*) as the type genera of different families would be confusing and not stabilizing. The only realistic way to preserve Latreille's *Armadillo* would be to reject the younger (but very well used) synonym *Armadillidium*. This equally confusing solution has never been proposed.

My proposal (BZN **52**: 241) to solve the nomenclatural problem outlined in this case was not made 'in favour' of the unused name *Pentheus* C.L. Koch, [1841], but its adoption in place of *Armadillo* Latreille is the only solution that does not violate all the basic rules and is valid under the Code, and it is certainly the least confusing. Moreover, the widely-used family-group name CUBARIDAE Brandt, 1833 could be resurrected in place of ARMADILLIDAE.

**Comment on the proposed conservation of the generic names *Crenitis* Bedel, 1881, *Georissus* Latreille, 1809 and *Oosternum* Sharp, 1882 (Insecta, Coleoptera)**
(Case 2925; see BZN **53**: 99–103)

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I am in full support of the well documented application by M. Hansen for the conservation of the three names *Crenitis*, *Georissus* and *Oosternum* by the suppression of their senior objective synonyms.

The action is particularly important in the case of the genus *Crenitis* that was already conserved by the Commission after being threatened by another senior synonym (details in the application). The generic name *Crenitis* is in fact the Greek noun meaning 'growing near a spring' (e.g. for plants), which is undoubtedly of feminine gender (see Liddell & Scott, *Greek-English Lexicon*).

The name *Georissus* (or *Georyssus*) was also consistently used in several recent, not strictly taxonomic papers, dealing with larval (Emden, 1956) or adult morphology (most recently Oliva, 1992). The names *Georissus* and *Oosternum* are used in a recent work dealing with the families and subfamilies of Coleoptera (Lawrence & Newton, 1995) that will be used as the standard reference for a long time.

**Additional references**

**Emden, F.I. van.** 1956. The *Georissus* larva — a hydrophilid. *Proceedings of the Royal Entomological Society of London*, (A)**31**: 2–24.

**Lawrence, J.F. & Newton, A.F., Jr.** 1995. Families and subfamilies of Coleoptera (with selected genera, notes, references and data on family-group names). Pp. 779–1006 *in* Pakaluk, J. & Allipinski, S.A. (Eds.), *Biology, phylogeny, and classification of Coleoptera. Papers celebrating the 80th birthday of Roy A. Crowson*. Warszawa.

**Oliva, A.** 1992. Cuticular microstructure in some genera of Hydrophilidae (Coleoptera) and their phylogenetic significance. *Bulletin de l'Institut Royal des Sciences Naturelles de Belgique, Entomologie*, **62**: 33–56.

**Comments on the proposed conservation of some mammal generic names first published in Brisson's (1762) *Regnum Animale***
(Case 2928; see BZN **51**: 135–146, 266–267, 342–348; **52**: 78–93, 187–192, 271–275, 347–350; **53**: 191–192)

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En complément à mes commentaires (BZN **52**: 273–275) et à leur discussion par Anthea Gentry (BZN **52**: 347–350), il me paraît utile d'apporter diverses précisions. Elles font partie de ce que j'annonçais précédemment (p. 273) comme des 'arguments que je pourrais expliciter longuement si nécessaire'.

Mme Gentry et moi sommes d'accord sur la disponibilité des noms de Brisson (1759) aux termes des Articles 11c(i), 11g(i) et 12b(1) du Code. Nous partageons aussi une 'reluctance to reject old and classic works'. De ce fait, je limiterai mes compléments à une démonstration de la disponibilité des noms de 1759 selon l'Article 11d (**A** ci-dessous), à l'exposé d'un moyen de satisfaire notre commune 'reluctance' (**B**) et finalement à l'expression formelle de mes contre-propositions (**C**).

Sur ces trois points, ma démarche se fonde sur un souhait de cohérence des actions de la Commission. Puisque l'on retient en nomenclature la partie de l'*Ornithologie* de Brisson (1760) intitulée *Tabula synoptica*, il faut retenir pour ses noms de genres de Mammifères, ses *Tabulae* homologues de 1759 et 1762 consacrées à cette Classe.

Il s'agit, en 1759, de ses *Division(s) générale(s)*, dans le vol. 4 du *Dictionnaire raisonné* de La Chesnaye (pp. 627–631 et 632) et, en 1762, de ses *Tabula(e) synoptica(e)* dans l'Editio altera auctior du *Regnum animale* (pp. 12–13 et 218). Ces deux textes équivalents concernent les noms et caractères des mêmes genres et ne citent pas d'espèces. Ce sont des extraits fidèles des tableaux récapitulatifs bilingues intitulés *Table(s)/Tabula(e)* que Brisson avait pris soin d'insérer dans son *Règne animal* de 1756 pour *ses* 42 genres de Quadrupèdes (dépliants face p. 22) et *ses* quatre genres de Cétacés (p. 346). Les extraits publiés en 1759 et intitulés *Division(s)* sont en français avec *ses noms latins de genres* au génitif. Les extraits publiés en 1762 et intitulés *Tabula(e)* sont en latin avec *ses noms de genres* au nominatif. Ces deux extraits du même texte initial doivent à mon avis être traités tous deux de manière identique. Si l'un de ces travaux est attribué à Brisson, l'autre doit l'être aussi. Si un nom nouveau taxinomiquement valide est à conserver à partir de l'un, il l'est aussi à partir de l'autre.

## A. DISPONIBILITE DES NOMS DE 1759

Mme Gentry ne met pas en cause la disponibilité des noms de 1762 qu'elle attribue implicitement à Brisson. Elle refuse, par contre, la disponibilité des noms de 1759 en arguant qu'aux termes de l'Art. 11d, ils seraient publiés par un tiers 'without acceptance or rejection'.

L'Art. 11d est aussi obscur en français qu'en anglais (les doubles négations 'sauf ... sauf', 'except ... unless' auraient dû être évitées). Il est singulier car il introduit, dans la linéarité de la chaîne publication→availability→potential validity→validity, une curieuse boucle de 'feed-back'. La réécriture de son exemple dans le Discussion Draft (1995) du Code à venir souligne cette difficulté, mais ne paraît pas heureuse (si un nom reste indisponible, ce n'est pas parce qu'il l'était antérieurement, c'est parce qu'il n'a pas été utilisé avec des éléments nouveaux de disponibilité). Tout au plus parvient-on à comprendre qu'une synonymie sans justification ou une référence purement bibliographique ne rendent pas un nom disponible.

Dans les *Divisions* de Brisson (1759, pp. 627–632), tous les noms en cause figurent de plein droit, et non pas comme synonymes ou simples références puisqu'ils s'accompagnent d'un énoncé des caractères des taxa correspondants.

Les trois doutes qu'à cet égard Mme Gentry voudrait tirer du '*Dictionnaire* itself' sont aisément réfutables.

(1) L' 'Approbation du Censeur Royal', que Mme Gentry cite incomplètement, ne relève pas d'une discussion scientifique (elle est 'irrelevant'). Elle est datée du 25 octobre 1758 et correspond seulement à une mesure de police *a priori*. Le Censeur y déclare agir 'par ordre de Mgr le Chancelier' pour 'permettre l'impression'; il ne s'y prévaut pas de son appartenance à l'Académie des Sciences. Ce n'est donc pas une évaluation scientifique *a posteriori*, même si le libraire l'a placée à la fin (p. 639) du dernier volume, juste avant le Privilège (p. 640). On peut même se demander si Guettard a vu en manuscrit les pages 593–636 ajoutées au vol. 4 après la lettre 'Z' du *Dictionnaire* car l'annonce de ce dernier dans le *Journal des Sçavants* de janvier 1759 (p. 61) ne mentionne que trois volumes, les quatre volumes n'étant signalés qu'en décembre (p. 831).

Si l'on tient cependant à vouloir lire l'Approbation comme un jugement scientifique, il faut la lire en entier. A côté de ce que Mme Gentry y a lu de neutre ou de négatif ('*Cet ouvrage est un abrégé ...* ') et qui concerne les noms vernaculaires, on y relevera une opinion plus positive. Guettard déclare en effet que le *Dictionnaire* peut 'être très utile pour l'intelligence & *la concordance des auteurs* qui ont traité ou parlé des animaux' (italiques C.D.).

(2) La question de savoir si la publication de La Chesnaye adopte les taxa de Brisson est plus intéressante. Il semble toutefois assez hâtif de dire que les pages additionnelles du vol. 4 du *Dictionnaire* représentent une 'section (pp. 593–636) in which taxonomic arrangements by Linnaeus (... various works) ... Brisson (1756) ... and Adanson (1757) are summarised without acceptance or rejection'.

Cette section comprend 11 textes. Huit d'entre eux, effectivement, résument (summarise) des travaux de Linné, Geoffroy, Klein, Dezallier d'Argenville et autres, sans jamais dépasser une énumération de noms de genres ni mentionner les caractères de ceux-ci. Trois de ces textes, par contre, ne sont pas des résumés mais des extraits qui donnent verbatim le détail des arrangements considérés. *Ces trois textes ainsi distingués par un traitement privilégié sont précisément tirés du travail de Brisson (1756).*

Le premier (pp. 625–627) présente les caractères des neuf classes de la *Division générale du Règne animal par M. Brisson*. Il insiste sur les mérites de Brisson et rappelle que l'étude de la riche collection de Réaumur 'lui a fourni l'idée de disposer les animaux *dans un ordre différent de ceux où on les a mis jusqu'à présent*'. Il se termine par les mots: 'Les deux premières classes, celles des Quadrupèdes & des Cétacées ont paru en 1756 en un Volume *in*-4°... *Elles font désirer les autres*. Voici les deux Divisions générales de *ses* Quadrupèdes & de *ses* Cétacées' (ital. C.D.).

Suivent les deux autre textes tirés de Brisson. Ils s'intitulent respectivement: *Division générale de la classe des Quadrupèdes selon l'ordre dans lequel ils sont rangés dans le Règne animal de M. Brisson* (pp. 627 631) et *Division générale de la Classe des Cétacées par M. Brisson* (p. 632).

Dans ces deux textes, *tous les genres reconnus par Brisson sont donnés avec leurs noms et leurs caractères*! Il est manifeste, au vu de ce traitement privilégié, que l'introduction à la fin du vol. 4 du *Dictionnaire* d'extraits fidèles du travail de Brisson (1756) procède d'une intention d'en souligner la nouveauté taxinomique.

(3) Le '*Dictionnaire* itself' confirme bien cette intention et dément l'idée que 'Brisson's names, among those of many authors, appear throughout the four volumes of the *Dictionnaire* but always only for comparison with the names used for the same taxon by other authors'. Je n'ai pas examiné ce que le *Dictionnaire* dit des noms de Brisson pris à Linné ou synonymes de ceux de Linné (voyez les listes, BZN **52**: 348) et me suis attaché seulement aux 11 genres dont le nom est à conserver. J'ai constaté, pour 10 d'entre eux, que La Chesnaye ne considère pas qu'il s'agisse du 'same taxon by other authors' car il déclare expressément que tel ou tel genre est *particulier* à Brisson, *fait* par Brisson, etc. Il énumère d'ailleurs, à l'appui, les caractères de chacun d'après Brisson.

Il dit, par exemple, sous 'Chevrotin' [*Tragulus* de la *Division générale*], vol. 1, p. 602: 'C'est un nom générique *que M. Brisson (p. 95) donne* à des animaux Quadrupèdes, dont le caractère est d'avoir ...' (suit l'énumération des caractères d'après Brisson, 1756 et la *Division générale*). Il dit de même, sous 'Chien volant' [*Pteropus*], vol. 1, p. 617: 'M. Linnaeus met cet animal dans l'ordre des Ferae ... *mais* M. Brisson, p. 215 *en fait un genre séparé* sous le nom de Roussette, dont le caractère est d'avoir ...'. Il dit encore, sous 'Loir' [*Glis*], vol. 2, p. 700: 'M. Brisson, p. 160, *fait un genre* du Loir, dont le caractère est, *dit-il*, d'avoir ...' ou, sous 'Loutre' [*Lutra*], vol. 2, p. 718: 'M. Brisson (p. 277) *fait un genre particulier* de la Loutre dont le caractère est d'avoir ...'. Les italiques que j'ai introduites dans ces citations soulignent les formules par lesquelles La Chesnaye a reconnu la *nouveauté* des genres de Brisson. J'ai constaté qu'il emploie des formules semblables, accompagnées du rappel des caractères, pour six autres des 11 genres de Mammifères dont les noms sont, avec les quatre précédents, proposés pour conservation: *Meles* [Blaireau, vol. 1, p. 296]; *Hydrochoerus* [Cabiai, vol. 1, p. 364]; *Hyaena* [Hyène, vol. 2, p. 509]; *Cuniculus* [Lapin du Brésil, vol. 2, p. 600]; *Philander* [Philander, sous Didelphe, vol. 2, p. 28]; *Tapirus* [Tapir, vols. 3, p. 19 et 4, p. 268]. Seul des 11 noms génériques discutés, Girafe = *Giraffa* n'est pas attribué à Brisson, mais aux 'modernes' [vol. 2, p. 386, sous Caméléopard].

Compte tenu de ces dires, il faut, là encore, considérer la publication par La Chesnaye des *Divisions* de Brisson avec leurs noms et caractères comme une reconnaissance explicite de leur nouveauté taxinomique.

Je conclus de ces trois discussions que, même si l'on admet un 'feed-back' de la validité taxinomique sur la disponibilité nomenclatoriale, on ne peut pas opposer à la disponibilité des noms de Brisson cette exigence de l'Article 11d.

## B. STATUT DES TRAVAUX DE BRISSON

Les rejets en bloc de travaux classiques anciens qui n'étaient pas uniformément binominaux sont considérés par R.V. Melville (*Towards stability in the names of animals*, 1995, p. 52) comme 'the more regrettable' de l'héritage de F. Hemming. Ces décisions rétrospectives, en effet, ont trop souvent été prises sans qu'on songeât à la conservation *préalable* de noms de genres cependant tenus depuis longtemps pour disponibles (cf. les noms de Geoffroy, 1762, cas invoqué aussi bien par Melville, que par moi-même, BZN **52**: 74).

L'idée 'that 'binary' and 'binominal' were completely synonymous', qui depuis 1948 sert à fonder ces rejets, est un sophisme du juriste Hemming (Melville, p. 51). Tout nom binominal étant nécessairement binaire, mais non l'inverse, la faute est de présenter une simple relation d'inclusion univoque comme une

relation d'équivalence réciproque. En bon logicien, l'ingénieur M.A. Chaper, l'un des pères des Règles (cf. Melville, p. 17), savait bien que la nomenclature linnéenne fut d'abord et longtemps binaire avant de devenir progressivement binominale.

A défaut d'avoir su, comme l'ont fait les botanistes, graduer les exigences des Règles à l'égard des ouvrages selon qu'on considérait des noms génériques ou spécifiques, il ne faut point persister sans précautions dans ces rejets en bloc. Pour cela, il convient, comme le suggère Mme Gentry, de préserver les noms génériques *avant de rejeter les ouvrages*. Cette opération est grandement facilitée lorsqu'*une partie bien individualisable d'un ouvrage concerne uniquement des noms génériques* (elle est prévue par les Art. 11c(iii) et 12b(2) pour les parties bien individualisables que constituent les Index). Il suffit de reconnaître cette partie comme un travail autonome ou un index et de la préserver en tant que telle.

C'est ce qui a été fait pour la *Tabula synoptica* de l'*Ornithologie* de Brisson (1760) et c'est ce que je propose ci-dessous pour ses *Divisions* et *Tabulae* de 1759 et 1762. Cette démarche est une reconnaissance des qualités de rigueur et de clarté de Brisson, qui ont valu à ses genres l'assentiment des taxinomistes et des nomenclateurs — y compris Strickland (cf. Melville, p. 8), tant anciens que modernes.

## C. MY OWN APPLICATION

I share the conservative views of Anthea Gentry concerning generic names in current use, and am reluctant to reject entire works on formal grounds which concern only specific names. I therefore propose the following:

The International Commission on Zoological Nomenclature is asked:

(1) to rule:

(a) that, as alone responsible for the names included, Brisson is to be considered, for the purposes of Article 50, as the author of the four works entitled:

(i) *Division générale de la classe des Quadrupèdes selon l'ordre dans lequel ils sont rangés dans le Règne animal de M. Brisson* and *Division générale de la classe des Cétacées par M. Brisson*, contained in vol. 4, pp. 627 631, 632 of *Dictionnaire raisonné et universel des animaux* (1759) by M.D.L. C.D.B. (i.e. M. de La Chesnaye des Bois);

(ii) *Tabula synoptica Quadrupedum* and *Tabula synoptica Cetaceorum*, contained in pp. 12–13, 218 of Brisson, *Regnum animale in classes IX distributum, sive synopsis methodica ... Editio altera auctior* (1762) [by J.N.S. Allamand];

(b) that the included new names, having been treated as taxonomically valid when published (Article 11d), are available;

(2) to use its plenary powers:

(a) to acknowledge that among the new generic names introduced in genitive form in the work of Brisson (1759) and corrected to be in nominative form in his work of 1762, the following 11 names are in current and continual use and are available, despite their inclusion in publications that are otherwise not consistently binominal [the list given in BZN **51**: 142, para. (2)(a)];

(b) to set aside all previous type species fixations for the corresponding 11 genera and to make the designations shown [the list given in BZN **51**: 142,

para. (2)(b), with the 11 attributions to 'Brisson, 1762' replaced by 'Brisson, 1759'];

(3) [as proposed in BZN **51**: 142–143, para. (3), with the 11 attributions to 'Brisson, 1762' replaced by 'Brisson, 1759'];

(4) [as proposed in BZN **51**: 143, para. (4), with the 11 attributions to 'Brisson, 1762' replaced by 'Brisson, 1759'];

(5) to place on the Official List of Works approved as Available for Zoological Nomenclature the four works by Brisson (1759) and (1762), cited in (1) above, notwithstanding the nomenclatural rejection in (6) below of the publications in which these works are contained;

(6) to place on the Official Index of Rejected and Invalid Works in Zoological Nomenclature the two non-consistently binominal publications cited in (1) above and entitled *Dictionnaire raisonné* by M.D.L.C.D.B. (M. de La Chesnaye des Bois, 1759) and Brisson, *Regnum animale ... Editio altera auctior* (1762), with the explicit exception of the four contained works by Brisson (*Divisions générales*, 1759 and *Tabulae synopticae*, 1762), cited in (1) above and placed in (5) above on the Official List, and with a special endorsement that such rejections of these publications as sources of names are not suppressions regarding their taxonomic use as sources of descriptions and indications.

**Remerciements**

En tant que zoologiste, j'apprécie vivement l'occasion que m'a donnée Mme Gentry de mieux comprendre certains points de l'histoire de nos Règles et de relever les faiblesses de l'Article 11d. J'apprécie surtout qu'elle m'ait permis de reconnaître en Brisson un taxinomiste dont les travaux très méthodiques, dans leurs diverses éditions et rééditions, sont judicieusement regardés (Casey Wood, 1931, *An introduction to the literature of vertebrate zoology*, p. 257) 'as next in authority to the Linnean productions'!

(2) Anthea Gentry

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Prof Dupuis's comment (above) on my application to conserve 11 of Brisson's (1762) generic names for mammals is an enlargement of his first comment (BZN **52**: 273–275; September 1995) to which I have already replied (BZN **52**: 347–350; December 1995). It is clear that both Prof Dupuis and I desire the conservation of 11 Brisson names and that it is only on the procedure for doing this that we differ. Prof Dupuis has now made a further set of alternative proposals, which I have studied carefully. I wish to reply to his three main points.

1. *Consistency of Commission treatments.* Prof Dupuis proposes that the Commission's treatment of Brisson's names for mammals should follow that for his (1760) publication for birds, the *Ornithologia*, and that Brisson's (1762) work, at least in part, should be placed on the Official List, rather than on the Official Index as I have proposed.

The treatment by the Commission of Brisson's (1760) work was prolonged and complicated and unfortunately resulted in confusion (see my application, BZN **51**: 135, para. 1, and previous comment, **52**: 347–348). Opinion 37 (1911) noted Brisson's

bird genera as 'in form and treatment as truly generic groups as there are of any author of his time' (see Allen, 1910, pp. 322–323). His generic names were recognised as published and accompanied by a description, and his nomenclature was considered to be 'binary' (the scientific names being in two parts, a single-word generic name and a specific name of any number of words); a ruling was made that 'Brisson's (1760) generic names of birds are available under the [1905] Code'.

The Commission settled the long-standing controversy (mentioned by Prof Dupuis above) over the meaning of the words 'binary' and 'binominal' at the 1948 Congress of Zoology in Paris, and concluded that generic names published by non-binominal authors were unavailable. Brisson's (1760) *Ornithologia* was recognised as non-binominal but, to maintain stability and continuity in the use of his names, the work was accepted under the plenary powers as available and placed on the Official List. Opinion 37 was cancelled (see BZN **4**: 65–66; 1950) and later (1955) replaced by Direction 16 which embodied the 1948 ruling.

By 1962 ornithologists recognised that among Brisson's (1760) generic names were five senior homonyms and a senior objective synonym of names in current use (see the Report by Francis Hemming, then Secretary to the Commission, in BZN **19**: 9–14; February 1962). Direction 105 (October 1963) restricted the availability given to Brisson's (1760) names to those in Latin in the *Tabula synoptica* in vol. 1 of his work. After this action there still remained two names in current use, rendered unavailable by the ruling, which needed to be dealt with individually: *Lorius* (placed on the Official List from Vigors, 1825 in Opinion 938, December 1970) and *Cacatua* (for which a ruling has yet to be made).

I referred (BZN **52**: 347) to my intention to avoid in this present case a recurrence of the uncertainty surrounding the status of Brisson's (1760) *Ornithologia*, necessitating three separate rulings over more than 50 years. I remain convinced that approval by the Commission of my proposal to place Brisson's (1762) work, which is clearly non-binominal, on the Official Index, while at the same time conserving his 11 generic names in current use, will result in a simple, clear and unambiguous ruling which is in accord with the Code.

2. *Conservation of Brisson's (1762) mammal generic names.* Prof Dupuis proposes to place on the Official List Brisson's (1762) *Tabula Synoptica Quadrupedum* and *Tabula Synoptica Cetaceorum* (pp. 12–13 and p. 218 of the *Regnum Animale*) while rejecting the greater part of the work. Each taxon listed in the *Tabulae* is accompanied by a brief description but I can find no merit in separating the *Tabulae* from the text of the 1762 work which contains much longer descriptions. Prof Dupuis notes that he has not examined the unused and unwanted names in the *Tabulae* (see the list in my comment on BZN **52**: 348). Failure to deal with these would leave the mammal names in an ambiguous and unstable state similar to that for birds following Direction 16. Nine new mammal names in Brisson (1762) have long been treated as junior synonyms of names published by Linnaeus (1758) (see, for example, Merriam, 1895). Nevertheless, if rendered available, Brisson's names could be used by any worker rigidly applying the Principle of Priority. I give here two examples. *Hircus* Brisson, 1762, treated by Merriam (1895) as a synonym of *Capra* Linnaeus, 1758, the name in use for a genus of goats, also encompassed the chamois and species of gazelle and therefore threatens the currently used names *Rupicapra* and *Gazella*, both of de Blainville (1816). *Tardigradus* Brisson, 1762, long treated as a synonym of *Bradypus*

Linnaeus, 1758, which is currently used for the three-toed sloths (see BZN **51**: 332 and **52**: 349), included both the two-toed and three-toed sloths and therefore has precedence over *Choloepus* Illiger, 1811, the name in use for the two-toed sloths. Reintroduction of any unused name from Brisson could not fail to upset some later name now in common use and, if Prof Dupuis's route were followed, further action would be needed to deal with the unused names. No doubt it would be possible to suppress them one by one. There is little point, however, in making names available only to suppress them. There would, incidentally, also be no point in putting the (1762) *Tabulae* on the Official List if, as Prof Dupuis has suggested (see below), the Brisson names were to be taken from de La Chesnaye's (1759) *Dictionnaire*.

3. *Availability of Brisson's mammal names from de La Chesnaye des Bois's* (*1759*) '*Dictionnaire raisonné et universel des animaux*'. Prof Dupuis proposes that Brisson's names be accepted as available from their citation in de La Chesnaye's (1759) *Dictionnaire*. I noted (BZN **52**: 349) that Brisson's names are repeated by de La Chesnaye from Brisson's (1756) publication. Contrary to Prof Dupuis's conclusion (above), I can find no evidence of a treatment for the summary (vol. 4, pp. 625–626) of Brisson's (1756) taxonomy and the citation of his names different from that accorded by de La Chesnaye to other pre-1758 authors (Linnaeus, Arnault de Nobleville & Salerne, Klein, d'Argenville and Adanson; see BZN **52**: 349).

As with Brisson's (1762) *Tabulae synopticae* (pp. 12–13 and p. 218 of the *Regnum Animale*), Prof Dupuis proposes to place on the Official List the entire (1759) *Division générale de la classe des quadrupedes* (vol. 4, pp. 627–631) and the *Division générale de la classe des cétacées* (p. 632), attributing them to Brisson. The ojections to the (1762) *Tabulae* outlined above apply here also. Prof Dupuis also proposes that, at the same time, the remaining four volumes of de La Chesnaye's *Dictionnaire* should be placed on the Official Index — a procedure to which he has objected (his comment above) in relation to other works. Commissioners would probably not be able to agree to this without a detailed study of the contents of the four volumes and the repercussions of their rejection first being made (see my assessment of Brisson's 1762 *Regnum Animale* in BZN **52**: 347–349).

To my knowledge all authors, classic and modern, have cited Brisson's names from his (1762) *Regnum Animale*, and none has attributed them to the report of his (1756) work written by de La Chesnaye in the (1759) *Dictionnaire*. For the sake of consistency it would be appropriate to maintain the same date (1762) and publication (Brisson's *Regnum Animale*) for the 11 generic names now proposed for conservation as for *Odobenus* in Opinion 467 (1957).

I wish to maintain my proposals (BZN **51**: 142–144) in this application for several reasons: (1) the availability of Brisson's names from 1759 is at best debatable; (2) some of Brisson's names which would be made available by Prof Dupuis's procedures would need to be suppressed; (3) consistency of authorship and date (Brisson, 1762) and publication (*Regnum Animale*) would be maintained; and (4) the ruling would be confined to the conservation of the 11 generic names in general usage.

## Additional reference

**Allen, J.A.** 1910. Collation of Brisson's genera of birds with those of Linnaeus. *Bulletin of the American Museum of Natural History*, **28**: 317–335.

(3) Vladimir E. Sokolov
*Russian Academy of Sciences, Moscow, Russia*

The application by Anthea Gentry is aimed at stopping the long debate about the status of 11 mammal generic names and at eliminating uncertainty in their usage.

The formation of the names *Philander* (Marsupialia), *Pteropus* (Chiroptera), *Glis*, *Cuniculus* and *Hydrochoerus* (Rodentia), *Meles*, *Lutra* and *Hyaena* (Carnivora), *Tapirus* (Perissodactyla), *Tragulus* and *Giraffa* (Artiodactyla), first introduced by Brisson (1762), is not perfect for formal requirements, nor indeed is the whole *Regnum Animale*. This is why the view of the authors of two recently published reference works (Honacki, Kinman & Koeppl, 1982; Wilson & Reeder, 1993), who rejected Brisson's names, should be respected. I see, however, at least two arguments against the rejection of Brisson's names.

The first is stability of nomenclature, one of the important principles of the Code and accepted by the international zoological community. The 11 generic names for mammals have been in established and very wide usage for more than two centuries, attributed to Brisson. The names are used in numerous manuals and reference books in many countries, including the former Soviet Union. Since some of the genera include fossil species, the names are also widely used in palaeotheriology. It would not be an exaggeration to say that most of these names are familiar to every student of biology and natural history in our country.

The rejection of Brisson's (1762) generic names would in some cases require substitution by other names which, in some instances, would lead to great confusion, as in the case of *Cuniculus*, which would have to be called *Agouti*. In these cases the new names would be unfamiliar to most zoologists. Some names would have to change authorship and date.

To overcome the relatively small and well-known formal problem, American workers (cited above) suggested a way that would create many more problems, with various undesirable consequences. Thus, the second reason to oppose the rejection of Brisson's names is common sense. The solution proposed in the application is based on common sense. In this we are invited to fix the accepted usage of the 11 generic names by their conservation, and at the same time to eliminate future confusion and controversy by rejecting Brisson's work for nomenclatural purposes as being incompletely binominal.

To conclude, I stongly support the reasonable initiative to conserve the 11 mammal generic names, to reject the work by Brisson (1762) for nomenclature purposes, and to make all the concomitant decisions, and I ask the Commission to solve this case positively by applying the fundamentals of stability, common sense and wisdom.

**Comments on the proposed conservation of usage of 15 mammal specific names based on wild species which are antedated by or contemporary with those based on domestic animals**
(Case 3010; see BZN **53**: 28–37, 125, 192–200)

(1) Elizabeth A. Voigt
*McGregor Museum, 2 Egerton Road, P.O. Box 316, Kimberley 8300, South Africa*

As a researcher concerned with the origins of domestic animals in southern Africa, I fully support the proposal of Juliet Clutton-Brock and her colleagues that there should be a clear distinction in the nomenclature between the domestic and wild forms of the relevant species, as laid out in the application. This is particularly important in southern Africa as the wild progenitors of domestic forms never occurred here. Unless there is uniform usage of specific names so as to identify domestic forms there will be considerable confusion in the literature with regard to domestic animals in southern Africa.

(2) A.V. Abramov
*Department of Mammalogy, Zoological Institute, Russian Academy of Sciences, St Petersburg 199034, Russia*

I agree with the proposal (BZN **53**: 28–37) put forward by Gentry, Clutton-Brock & Groves to conserve the usage of separate specific names for wild and domestic mammals.

In their application the authors have incorrectly cited the source of the original description of the wild Bactrian camel, *Camelus ferus*, and have attributed it to Przewalski (1883). As colleagues and I (Abramov, Baryshnikov & Tikhonov, 1992, pp. 10–11) have already noted, this species was described by Przewalski (1878, pp. 20, 43) as *Camelus bactrianus ferus* in an earlier work.

Falk (1786, p. 292) described *Camelus dromedarius ferus* from East Kazakhstan, West China, Mongolia and South Siberia. Whether his description refers to wild or feral specimens, and to the Arabian or Bactrian camel, is not fully clear, but his name is available and is a senior homonym of *Camelus ferus* Przewalski, 1878. Falk's name has not been in use for a long time and should be suppressed in order to conserve Przewalski's (1878) name, as earlier proposed (Heptner, 1966; Abramov et al., 1992).

The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress for the purposes of both the Principle of Priority and the Principle of Homonymy the name *ferus* Falk, 1786, as published in the trinomen *Camelus dromedarius ferus*, and all uses of the name *Camelus ferus* prior to the publication of *Camelus ferus* Przewalski, 1878;

(2) to place on the Official Index of Rejected and Invalid Names in Zoology the name *ferus* Falk, 1786, as published in the trinomen *Camelus dromedarius ferus*.

**Additional references**

**Abramov, A.V., Baryshnikov, G.F. & Tikhonov, A.N.** 1992. *The catalogue of type specimens in the collection of the Zoological Institute of the Russian Academy of Sciences.* Mammalia, part 3. 28 pp. St Petersburg. [In Russian].

**Falk, J.P.** 1786. *Beiträge zur topographischen Kenntnis des Russischen Reiches*, vol. 3. 584 pp. St Petersburg.

**Heptner, V.G.** 1966. On the distribution of the wild camel (*Camelus ferus* Przew., 1883) on the territory of USSR. *Zoologicheskii Zhurnal*, **45**: 109–118. [In Russian].

**Przewalski, N.M.** 1878. *From Kul'dzha through Tyan'-Shan' to Lob-Nor.* 63 pp. St Petersburg. [In Russian].

(3) Henry Gee
*23 Northcroft Road, Ealing, London W13 9SR, U.K.*

I support fully the proposal to conserve the usage of the 15 mammal specific names which were based on wild species.

My studies on British Pleistocene bovines made it clear to me that *Bos primigenius* Bojanus, 1827 is as different from *Bos taurus* Linnaeus, 1758 in its morphology as it is from any other bovid. Therefore to include *primigenius* in *taurus* after their separation seems to me both illogical and unnecessary.

To argue in opposition that *B. primigenius* and *B. taurus* might have been interfertile is pointless as *B. primigenius* is now extinct and this cannot be tested; we do know that *B. taurus* can hybridize with members of other genera such as *Bison*. One might as well turn the argument on its head by suggesting (with at least equal justification) that *taurus* should be subsumed within *primigenius*, but this would — I think wrongly — ignore the well-known differences between wild and domestic forms.

I think that the authors of the application are correct in not discussing the nomenclature of domestic animals in this proposal. This would only confuse an already complicated issue, which is probably best tackled piece by piece.

(4) Alan W. Gentry
*Department of Palaeontology, The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.*

I wish to express support for the proposed conservation of usage of 15 mammal names based on wild species.

The inconsistency in the nomenclature of species from which domestic forms have been derived has led to ambiguity in academic studies and administrative difficulties in wildlife legislation and customs documentation. It is deeply undesirable to allow a situation to continue in which workers are confused by the use of names. A substantial improvement of the situation will ensue, if this application is approved, in that the usage of 15 widely used scientific names will be conserved.

Success of this application will also produce, as far as any outside change can, better conditions in which nomenclature for domestic animals can be systematized.

# OPINION 1857

## *Metablastothrix* Sugonjaev, 1964 (Insecta, Hymenoptera): *Blastothrix isomorpha* Sugonjaev, 1964 designated as the type species

**Keywords.** Nomenclature; taxonomy; Hymenoptera; *Metablastothrix*; *Metablastothrix isomorpha*.

**Ruling**

(1) Under the plenary powers all previous fixations of type species for the nominal genus *Metablastothrix* Sugonjaev, 1964 are hereby set aside and *Blastothrix isomorpha* Sugonjaev, 1964 is designated as the type species.

(2) The name *Metablastothrix* Sugonjaev, 1964 (gender: feminine), type species by designation under the plenary powers in (1) above *Blastothrix isomorpha* Sugonjaev, 1964, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *isomorpha* Sugonjaev, 1964, as published in the binomen *Blastothrix* (*Metablastothrix*) *isomorpha* (specific name of the type species of *Metablastothrix* Sugonjaev, 1964), is hereby placed on the Official List of Specific Names in Zoology.

**History of Case 2916**

An application for the designation of *Blastothrix* (*Metablastothrix*) *isomorpha* Sugonjaev, 1964 as the type species of *Metablastothrix* Sugonjaev, 1964 was received from Dr Natalia D. Voinovich, Prof Vladimir A. Trjapitzin and Dr Eugeny S. Sugonjaev (*Zoological Institute, Russian Academy of Sciences, St Petersburg, Russia*) on 22 November 1993. After correspondence the case was published in BZN **52**: 54–56 (March 1995). Notice of the case was sent to appropriate journals.

**Decision of the Commission**

On 1 March 1996 the members of the Commission were invited to vote on the proposals published in BZN **52**: 55. At the close of the voting period on 1 June 1996 the votes were as follows:

Affirmative votes — 21: Bayer, Bock, Cocks, Corliss, Dupuis, Hahn, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Trjapitzin

Negative votes — 1: Štys.

Bouchet abstained.

No vote was received from Halvorsen.

Cogger and Ride were on leave of absence.

Bouchet commented: 'The application does not give the valid name for the misidentified type species of *Metablastothrix* Sugonjaev, 1964. It would perhaps be more convenient to have the species from St Petersburg which was studied by Sugonjaev as the type, rather than the less easily accessible *B. isomorpha* from Kazakhstan. Furthermore, the biology of Sugonjaev's misidentified species is known, but the application fails to mention if it is also known for *B. isomorpha*. I consider

that the data in the application are insufficient for an informed decision and I therefore abstain'. Štys commented: 'There should be a statement of what, in the view of the authors, is the specific identity of *Microterys truncatipennis* sensu Sugonjaev (1964), non Ferrière (1955). They leave the formerly designated misidentified type species without identity'.

**Original references**

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

*isomorpha*, *Blastothrix* (*Metablastothrix*), Sugonjaev, 1964, *Entomologicheskoe Obozrenie*, **43**(2): 371.

*Metablastothrix* Sugonjaev, 1964, *Entomologicheskoe Obozrenie*, **43**(2): 371.

# OPINION 1858

## *Nectria* Gray, 1840 (Echinodermata, Asteroidea): *Nectria ocellata* Perrier, 1875 designated as the type species

**Keywords.** Nomenclature; taxonomy; Echinodermata; Asteroidea; starfish; *Nectria*; Australia.

**Ruling**

(1) Under the plenary powers all previous fixations of type species for the nominal genus *Nectria* Gray, 1840 are hereby set aside and *Nectria ocellata* Perrier, 1875 is designated as the type species.

(2) The name *Nectria* Gray, 1840 (gender: feminine), type species by designation under the plenary powers in (1) above *Nectria ocellata* Perrier, 1875, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *ocellata* Perrier, 1875, as published in the binomen *Nectria ocellata* (specific name of the type species of *Nectria* Gray, 1840) and as defined by the lectotype (specimen no. 1958.7.30.20 in the Natural History Museum, London) designated by Zeidler & Rowe (1986), is hereby placed on the Official List of Specific Names in Zoology.

**History of Case 2951**

An application for the designation of *Nectria ocellata* Perrier, 1875 as the type species of *Nectria* Gray, 1840 was received from Dr Wolfgang Zeidler (*South Australian Museum, Adelaide, Australia*) on 12 September 1994. After correspondence the case was published in BZN **52**: 164–165 (June 1995). Notice of the case was sent to appropriate journals.

**Decision of the Commission**

On 1 March 1996 the members of the Commission were invited to vote on the proposals published in BZN **52**: 165. At the close of the voting period on 1 June 1996 the votes were as follows:

Affirmative votes — 20: Bayer, Bock, Cocks, Corliss, Hahn, Heppell, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Trjapitzin

Negative votes — 1: Holthuis.

Bouchet and Dupuis abstained.

No vote was received from Halvorsen.

Cogger and Ride were on leave of absence.

**Original references**

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

*Nectria* Gray, 1840, *Annals and Magazine of Natural History*, (1)**6**(37): 287.

*ocellata*, *Nectria*, Perrier, 1875, *Révision de la collection de stellerides du Muséum d'Histoire naturelle de Paris*, p. 188.

The following is the reference for the designation of the lectotype of *Nectria ocellata* Perrier, 1875:

**Zeidler, W. & Rowe, F.W.E.** 1986. *Records of the South Australian Museum*, **19**(9): 120.

# OPINION 1859

## Nine specific names of southern Afrotropical birds conserved

**Keywords.** Nomenclature; taxonomy; Aves; *Camaroptera brachyura*; *Galerida magnirostris*; *Lamprotornis nitens phoenicopterus*; *Mirafra apiata*; *Motacilla aguimp*; *Oenanthe monticola*; *Oriolus larvatus*; *Prinia flavicans*; *Zosterops pallidus*; Africa.

**Ruling**

(1) Under the plenary powers the following specific names are hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
  (a) *nabirop* Temminck, 1807, as published in the binomen *Sturnus nabirop*;
  (b) *rostrocrasso* Wilkes, [1796], as published in the binomen *Alauda rostrocrasso*;
  (c) *percutiens* Wilkes, [1796], as published in the binomen *Alauda percutiens*;
  (d) *citrinus* Wilkes, 1817, as published in the binomen *Motacilla citrinus*;
  (e) *viridis* Wilkes, 1817, as published in the binomen *Motacilla viridis*;
  (f) *arenarea* Wilkes, 1817, as published in the binomen *Motacilla arenarea*;
  (g) *montana* Wilkes, 1817, as published in the binomen *Motacilla montana*;
  (h) *tcheric* Wilkes, 1817, as published in the binomen *Motacilla tcheric*;
  (i) *africanus* Wilkes, 1820, as published in the binomen *Oriolus africanus*.

(2) The following names are hereby placed on the Official List of Specific Names in Zoology:
  (a) *phoenicopterus* Swainson, [1837], as published in the binomen *Lamprotornis phoenicopterus*;
  (b) *magnirostris* Stephens, 1826, as published in the binomen *Alauda magnirostris*;
  (c) *apiata* Vieillot, 1816, as published in the binomen *Alauda apiata*;
  (d) *flavicans* Vieillot, [1820], as published in the binomen *Sylvia flavicans*;
  (e) *brachyura* Vieillot, [1820], as published in the binomen *Sylvia brachyura*;
  (f) *aguimp* Temminck, [1820], as published in the binomen *Motacilla aguimp*;
  (g) *monticola* Vieillot, 1818, as published in the binomen *Oenanthe monticola*;
  (h) *pallidus* Swainson, [1837], as published in the binomen *Zosterops pallidus*;
  (i) *larvatus* Lichtenstein, 1823, as published in the binomen *Oriolus larvatus*.

(3) The following names are hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology:
  (a) *nabirop* Temminck, 1807, as published in the binomen *Sturnus nabirop* and as suppressed in (1)(a) above;
  (b) *rostrocrasso* Wilkes, [1796] as published in the binomen *Alauda rostro-crasso* and as suppressed in (1)(b) above;
  (c) *percutiens* Wilkes, [1796], as published in the binomen *Alauda percutiens* and as suppressed in (1)(c) above;
  (d) *citrinus* Wilkes, 1817, as published in the binomen *Motacilla citrinus* and as suppressed in (1)(d) above;
  (e) *viridis* Wilkes, 1817, as published in the binomen *Motacilla viridis* and as suppressed in (1)(e) above;

(f) *arenarea* Wilkes, 1817, as published in the binomen *Motacilla arenarea* and as suppressed in (1)(f) above;
(g) *montana* Wilkes, 1817, as published in the binomen *Motacilla montana* and as suppressed in (1)(g) above;
(h) *tcheric* Wilkes, 1817, as published in the binomen *Motacilla tcheric* and as suppressed in (1)(h) above;
(i) *africanus* Wilkes, 1820 as published in the binomen *Oriolus africanus* and as suppressed in (1)(i) above.

**History of Case 2931**

An application for the conservation of nine specific names of southern Afrotropical birds was received from Dr P.A. Clancey (*Durban Natural Science Museum, Durban, South Africa*) and Dr R.K. Brooke (*Percy FitzPatrick Institute of African Ornithology, University of Cape Town, Rondebosch, South Africa*) on 22 February 1994. After correspondence the case was published in BZN **52**: 61 64 (March 1995). Notice of the case was sent to appropriate journals.

**Decision of the Commission**

On 1 March 1996 the members of the Commission were invited to vote on the proposals published in BZN **52**: 63. At the close of the voting period on 1 June 1996 the votes were as follows:

Affirmative votes — 23: Bayer, Bock, Bouchet, Cocks, Corliss, Dupuis, Hahn, Heppell, Holthuis, Kabata, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Nye, Savage, Schuster, Starobogatov, Štys, Trjapitzin

Negative votes — none.

No vote was received from Halvorsen.

Cogger and Ride were on leave of absence.

**Original references**

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

*africanus*, *Oriolus*, Wilkes, 1820, *Encyclopaedia Londinensis*, vol. 17, p. 740.
*aguimp*, *Motacilla*, Temminck, [1820], *Manual d'ornithologie*, Ed. 2, part 1, p. lxviii.
*apiata*, *Alauda*, Vieillot, 1816, *Nouveau dictionnaire d'histoire naturelle*, Ed. 2, vol. 1, p. 342.
*arenarea*, *Motacilla*, Wilkes, 1817, *Encyclopaedia Londinensis*, vol. 16, p. 85.
*brachyura*, *Sylvia*, Vieillot, [1820], *in* Bonnaterre, J.P. & Vieillot, L.J.P., *Tableau encyclopaedique et méthodique, trois règnes de la nature, ornithologie*, vol. 2, p. 459.
*citrinus*, *Motacilla*, Wilkes, 1817, *Encyclopaedia Londinensis*, vol. 16, p. 78.
*flavicans*, *Sylvia*, Vieillot, [1820], *in* Bonnaterre, J.P. & Vieillot, L.J.P., *Tableau encyclopaedique et méthodique, trois règnes de la nature, ornithologie*, vol. 2, p. 438.
*larvatus*, *Oriolus*, Lichtenstein, 1823, *Verzeichniss der Doubletten des Zoologischen Museum der Königl. Universität zu Berlin ...*, p. 20.
*magnirostris*, *Alauda*, Stephens, 1826, *in* Shaw, G., *General zoology* (Aves), vol. 14, part 1, p. 26.
*montana*, *Motacilla*, Wilkes, 1817, *Encyclopaedia Londinensis*, vol. 16, p. 89.
*monticola*, *Oenanthe*, Vieillot, 1818, *Nouveau dictionnaire d'histoire naturelle*, Ed. 2, vol. 21, p. 434.
*nabirop*, *Sturnus*, Temminck, 1807, *Catalogue systématique du cabinet d'ornithologie et de la collection de quadrumanes de Crd. Jb. Temminck*, p. 85.
*pallida*, *Zosterops*, Swainson, [1837], Animals in Menageries, part 3. *In* Lardner, D., *Cabinet Cyclopaedia*, vol. 98, p. 294.

*percutiens*, *Alauda*, Wilkes, [1796], *Encyclopaedia Londinensis*, vol. 1, p. 236.
*phoenicopterus*, *Lamprotornis*, Swainson, [1837], Animals in Menageries, part 3. *In* Lardner, D., *Cabinet Cyclopaedia*, vol. 98, p. 360.
*rostrocrasso*, *Alauda*, Wilkes, [1796], *Encyclopaedia Londinensis*, vol. 1, p. 235.
*tcheric*, *Motacilla*, Wilkes, 1817, *Encyclopaedia Londinensis*, vol. 16, p. 94.
*viridis*, *Motacilla*, Wilkes, 1817, *Encyclopaedia Londinensis*, vol. 16, p. 80.

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Names placed on the Official Lists and Indexes in Volume 53, and amendments of existing entries, are listed below under three headings: Family-Group Names, Generic Names and Specific Names. Entries on the Official Lists are in bold type and those on the Official Indexes in non-bold type.

### Family-Group Names

AGONIDAE Kirby, 1837 (Coleoptera) Op. 1855
**AGONIDAE** Swainson, 1839 (Osteichthyes) Op. 1855
**AGONUMIDAE** Kirby, 1837 (Coleoptera) Op. 1855
**AGRODINI** Nordmann, 1837 (Coleoptera) Op. 1851
CAECILIAIDAE Rafinesque, 1814 (Amphibia, Gymnophiona) Op. 1830
CAECILIIDAE Kolbe, 1880 (Psocoptera) Op. 1830
**CAECILIIDAE** Rafinesque, 1814 (Amphibia, Gymnophiona) Op. 1830
**CAECILIUSIDAE** Kolbe, 1880 (Psocoptera) Op. 1830
CECILINIA Rafinesque, 1814 (Amphibia, Gymnophiona) Op. 1830
**CUBARIDAE** Brandt, 1833 (Isopoda) Op. 1848
**GYROHYPNINI** Kirby, 1837 (Coleoptera) Op. 1851
**LIVONECINAE** Schioedte & Meinert, 1884 (Isopoda) Op. 1849
**MEGALODONTESIDAE** Konow, 1897 (Hymenoptera) Op. 1829
MEGALODONTIDAE Konow, 1897 (Hymenoptera) Op. 1829
**MEGALODONTIDAE** Morris & Lycett, 1853 (Bivalvia) Op. 1829
**PLATYCNEMINI** Nordmann, 1837 (Coleoptera) Op. 1851
**QUEDIINI** Kraatz, [1857] (Coleoptera) Op. 1851
**XANTHOLININI** Erichson, 1839 (Coleoptera) Op. 1851

### Generic Names

***Acernaspis*** Campbell, 1967 (Trilobita) Op. 1846
***Agonum*** Bonelli, 1810 (Coleoptera) Op. 1855
***Agonus*** Bloch & Schneider, 1801 (Osteichthyes) Op. 1855
***Agrodes*** Nordmann, 1837 (Coleoptera) Op. 1851
*Apolybas* Alvarenga, 1965 (Coleoptera) Op. 1824
*Aspidophorus* Lacépède, [1801] (Osteichthyes) Op. 1855
*Bohemilla* Vejdovský, 1883 (Oligochaeta) Op. 1835
*Bohemillula* Strand, 1928 (Oligochaeta) Op. 1835
*Cassidella* Hofker, 1953 (Foraminiferida) Op. 1834
***Coelophysis*** Cope, 1889 (Reptilia) Op. 1842
***Coproica*** Rondani, 1861 (Diptera) Op. 1839
*Coptorhinus* Dejean, 1833 (Coleoptera) Op. 1838
*Coptorhinus* Guérin Méneville, [1838] (Coleoptera) Op. 1838
*Cubaris* Billberg, 1820 (Isopoda) Op. 1848
***Cubaris*** Brandt, 1833 (Isopoda) Op. 1848
*Dendrochariessa* Gistl, 1848 (Coleoptera) Op. 1825
*Descarpentriesina* Leraut, 1983 (Coleoptera) Op. 1825

***Diplocentrus*** Peters, 1861 (Arachnida) Op. 1847
***Diplonychus*** Laporte, 1833 (Heteroptera) Op. 1850
***Eophacops*** Delo, 1935 (Trilobita) Op. 1846
***Eretmosaurus*** Seeley, 1874 (Reptilia) Op. 1831
***Fursenkoina*** Loeblich & Tappan, 1961 (Foraminiferida) Op. 1834
*Heteroptera* Macquart, 1835 (Diptera) Op. 1839
***Hydrophoria*** Robineau-Desvoidy, 1830 (Diptera) Op. 1827
***Ischiolepta*** Lioy, 1864 (Diptera) Op. 1839
*Ischyrus* Dejean, 1836 (Coleoptera) Op. 1824
***Ischyrus*** Lacordaire, 1842 (Coleoptera) Op. 1824
*Lampra* Dejean, 1833 (Coleoptera) Op. 1825
*Lironeca* Leach *in* White, 1847 (Isopoda) Op. 1849
***Livoneca*** Leach, 1818 (Isopoda) Op. 1849
*Lybas* Dejean, 1836 (Coleoptera) Op. 1824
***Lybas*** Lacordaire, 1842 (Coleoptera) Op. 1824
***Lycognathophis*** Boulenger, 1893 (Reptilia) Op. 1856
*Macrochaeta* Bretscher, 1896 (Oligochaeta) Op. 1835
***Macrochaetina*** Bretscher, 1899 (Oligochaeta) Op. 1835
***Megalodon*** Sowerby, 1827 (Bivalvia) Op. 1829
***Megalodontes*** Latreille, 1802 (Hymenoptera) Op. 1829
***Megischyrus*** Crotch, 1873 (Coleoptera) Op. 1824
***Melanophila*** Eschscholtz, 1829 (Coleoptera) Op. 1826
***Metablastothrix*** Sugonjaev, 1964 (Hymenoptera) Op. 1857
*Micrischyrus* Alvarenga, 1965 (Coleoptera) Op. 1824
*Mycotretus* Dejean, 1836 (Coleoptera) Op. 1824
***Mycotretus*** Lacordaire, 1842 (Coleoptera) Op. 1824
***Nectria*** Gray, 1840 (Asteroidea) Op. 1858
***Nesopupa*** Pilsbry, 1900 (Gastropoda) Op. 1823
***Oniscus*** Linnaeus, 1758 (Isopoda) Op. 1837
***Palmar*** Schaefer, 1949 (Coleoptera) Op. 1825
***Phaenops*** Dejean, 1833 (Coleoptera) Op. 1826
***Platycnemus*** Nordmann, 1837 (Coleoptera) Op. 1851
***Poecilonota*** Eschscholtz, 1829 (Coleoptera) Op. 1825
***Pseudocaranx*** Bleeker, 1863 (Osteichthyes) Op. 1841
*Pterodiscus* Pilsbry, 1893 (Gastropoda) Op. 1845
*Pterygometopidella* Wedekind, 1912 (Trilobita) Op. 1846
*Ptychochilus* Boettger, 1881 (Gastropoda) Op. 1823
*Ptychochylus* Boettger, 1881 (Gastropoda) Op. 1823
***Quedius*** Stephens, 1829 (Coleoptera) Op. 1851
***Rhabdomeson*** Young & Young, 1874 (Bryozoa) Op. 1854
*Rioarribasaurus* Hunt & Lucas, 1991 (Reptilia) Op. 1842
***Scintillatrix*** Obenberger, 1956 (Coleoptera) Op. 1825
*Scopelophis* Fitzinger, 1843 (Reptilia) Op. 1856
***Scottia*** Brady & Norman, 1889 (Ostracoda) Op. 1836
***Stictostroma*** Parks, 1936 (Stromatoporoidea) Op. 1843
***Temnorhynchus*** Hope, 1837 (Coleoptera) Op. 1838
***Tropidoptera*** Ancey, 1889 (Gastropoda) Op. 1845

***Vejdovskyella*** Michaelsen, 1903 (Oligochaeta) Op. 1835
***Xerammobates*** Popov, 1951 (Hymenoptera) Op. 1853

**Specific Names**

***acuminata*, *Buprestis***, De Geer, 1774 (Coleoptera) Op. 1826
***acutangula*, *Limosina***, Zetterstedt, 1847 (Diptera) Op. 1839
*adscensionis*, *Scomber*, Osbeck, 1771 (Osteichthyes) Op. 1841
*africanus*, *Oriolus*, Wilkes, 1820 (Aves) Op. 1859
***agilis*, *Melissodes***, Cresson, 1878 (Hymenoptera) Op. 1852
***aguimp*, *Motacilla***, Temminck, [1820] (Aves) Op. 1859
*alternans*, *Coluber*, Lichtenstein, 1823 (Reptilia) Op. 1832
*americana*, *Macrocera*, Lepeletier, 1841 (Hymenoptera) Op. 1852
***apiata*, *Alauda***, Vieillot, 1816 (Aves) Op. 1859
*arenarea*, *Motacilla*, Wilkes, 1817 (Aves) Op. 1859
*ascensionis*, *Caranx*, Cuvier *in* Cuvier & Valenciennes, 1833 (Osteichthyes) Op. 1841
***asellus*, *Oniscus***, Linnaeus, 1758 (Isopoda) Op. 1837
***banksii*, *Psittacus***, Latham, 1790 (Aves) Op. 1833
***bauri*, *Coelurus***, Cope, 1887 (Reptilia) Op. 1842
***brachyura*, *Sylvia***, Vieillot, [1820] (Aves) Op. 1859
*brunnea*, *Cubaris*, Brandt, 1833 (Isopoda) Op. 1848
***cataphractus*, *Cottus***, Linnaeus, 1758 (Osteichthyes) Op. 1855
***cephalotes*, *Tenthredo***, Fabricius, 1781 (Hymenoptera) Op. 1829
*citrinus*, *Motacilla*, Wilkes, 1817 (Aves) Op. 1859
*colberti*, *Rioarribasaurus*, Hunt & Lucas, 1991 (Reptilia) Op. 1842
***comata*, *Bohemilla***, Vejdovský, 1883 (Oligochaeta) Op. 1835
***cucullatus*, *Megalodon***, Sowerby, 1827 (Bivalvia) Op. 1829
***cyanea*, *Buprestis***, Fabricius, 1775 (Coleoptera) Op. 1826
***dentex*, *Scomber***, Bloch & Schneider, 1801 (Osteichthyes) Op. 1841
***denticulatus*, *Borborus***, Meigen, 1830 (Diptera) Op. 1839
***desponsa*, *Melissodes***, Smith, 1854 (Hymenoptera) Op. 1852
*doliatus*, *Coluber*, Wied-Neuwied, [1824] (Reptilia) Op. 1832
***elegans*, *Agrodes***, Nordmann, 1837 (Coleoptera) Op. 1851
***festiva*, *Buprestis***, Linnaeus, 1767 (Coleoptera) Op. 1825
***flavicans*, *Sylvia***, Vieillot, [1820] (Aves) Op. 1859
*flavicollo*, *Psittacus banksii*, Kerr, 1792 (Aves) Op. 1833
*forsteri*, *Natrix*, Wagler *in* Spix, 1824 (Reptilia) Op. 1832
*galbineus*, *Armadillo*, Eschscholtz, 1823 (Isopoda) Op. 1848
*glaucus*, *Scomber*, Linnaeus, 1758 (Osteichthyes) Op. 1841
***gorriense*, *Stictostroma***, Stearn, 1995 (Stromatoporoidea) Op. 1843
***handwerki*, *Phacops***, Weller, 1907 (Trilobita) Op. 1846
***hoevenii*, *Bagrus***, Bleeker, 1846 (Osteichthyes) Op. 1840
***humilis*, *Bombus***, Illiger, 1806 (Hymenoptera) Op. 1828
***intermedia*, *Macrochaeta***, Bretscher, 1896 (Oligochaeta) Op. 1835
***isomorpha*, *Blastothrix* (*Metablastothrix*)**, Sugonjaev, 1964 (Hymenoptera) Op. 1857
***juliana*, *Aplysia***, Quoy & Gaimard, 1832 (Gastropoda) Op. 1844
***lancifer*, *Musca***, Harris, [1780] (Diptera) Op. 1827

***larvatus*, *Oriolus***, Lichtenstein, 1823 (Aves) Op. 1859
***lateritius*, *Platycnemus***, Nordmann, 1837 (Coleoptera) Op. 1851
***lathami*, *Psittacus***, Temminck, 1807 (Aves) Op. 1833
***lesueuri*, *Erotylus***, Chevrolat, 1835 (Coleoptera) Op. 1824
***levicollis*, *Staphylinus***, Brullé, 1832 (Coleoptera) Op. 1851
***lucorum*, *Apis***, Linnaeus, 1761 (Hymenoptera) Op. 1828
***lugubris*, *Caranx***, Poey, [1860] (Osteichthyes) Op. 1841
*magnificus*, *Psittacus*, Shaw *in* Shaw & Nodder, 1790 (Aves) Op. 1833
***magnirostris*, *Alauda***, Stephens, 1826 (Aves) Op. 1859
***marginatus*, *Carabus***, Linnaeus, 1758 (Coleoptera) Op. 1855
***mexicanus*, *Diplocentrus***, Peters, 1861 (Arachnida) Op. 1847
*m-nigrum*, *Coluber*, Raddi, 1820 (Reptilia) Op. 1832
*montana*, *Motacilla*, Wilkes, 1817 (Aves) Op. 1859
***monticola*, *Oenanthe***, Vieillot, 1818 (Aves) Op. 1859
***murina*, *Cubaris***, Brandt, 1833 (Isopoda) Op. 1848
***muscorum*, *Apis***, Linnaeus, 1758 (Hymenoptera) Op. 1828
*nabirop*, *Sturnus*, Temminck, 1807 (Aves) Op. 1859
*nitens*, *Helix*, Gmelin, [1791] (Gastropoda) Op. 1822
***nitens*, *Helix***, Michaud, 1831 (Gastropoda) Op. 1822
***nitidula*, *Helix***, Draparnaud, 1805 (Gastropoda) Op. 1822
***normalis*, *Lybas***, Lacordaire, 1842 (Coleoptera) Op. 1824
***ocellata*, *Nectria***, Perrier, 1875 (Asteroidea) Op. 1858
***orestes*, *Phacops***, Billings, 1860 (Trilobita) Op. 1846
***ovatus*, *Gasterosteus***, Linnaeus, 1758 (Osteichthyes) Op. 1841
***oxianus*, *Ammobates* (*Xerammobates*)**, Popov, 1951 (Hymenoptera) Op. 1853
***pallidus*, *Zosterops***, Swainson, [1837] (Aves) Op. 1859
*pensylvanica*, *Macrocera*, Lepeletier, 1841 (Hymenoptera) Op. 1852
*percutiens*, *Alauda*, Wilkes, [1796] (Aves) Op. 1859
*philadelphica*, *Macrocera*, Lepeletier, 1841 (Hymenoptera) Op. 1852
***phoenicopterus*, *Lamprotornis***, Swainson, [1837] (Aves) Op. 1859
*plana*, *Nepa*, Sulzer, 1776 (Heteroptera) Op. 1850
***poecilogyrus*, *Coluber***, Wied-Neuwied, [1824] (Reptilia) Op. 1832
***progracile*, *Rhabdomeson***, Wyse Jackson & Bancroft, 1995 (Bryozoa) Op. 1854
***pseudobrowniana*, *Scottia***, Kempf, 1971 (Ostracoda) Op. 1836
***quadripunctatus*, *Erotylus***, Olivier, 1792 (Coleoptera) Op. 1824
***redmanii*, *Livoneca***, Leach, 1818 (Isopoda) Op. 1849
***retusus*, *Scarabaeus***, Fabricius, 1781 (Coleoptera) Op. 1838
*rostrocrasso*, *Alauda*, Wilkes, [1796] (Aves) Op. 1859
***rugosus*, *Plesiosaurus***, Owen, 1840 (Reptilia) Op. 1831
*rustica*, *Nepa*, Fabricius, 1775 (Heteroptera) Op. 1850
***rustica*, *Nepa***, Fabricius, 1781 (Heteroptera) Op. 1850
***rutilans*, *Buprestis***, Fabricius, [1777] (Coleoptera) Op. 1825
***seychellensis*, *Psammophis***, Schlegel, 1837 (Reptilia) Op. 1856
*sorex*, *Aplysia*, Rang, 1828 (Gastropoda) Op. 1844
***squammosa*, *Virgulina***, d'Orbigny, 1826 (Foraminiferida) Op. 1834
***stollii*, *Zaitha***, Amyot & Serville, 1843 (Heteroptera) Op. 1850
***tantilla*, *Pupa***, Gould, 1847 (Gastropoda) Op. 1823

*tcheric*, *Motacilla*, Wilkes, 1817 (Aves) Op. 1859
***terrestris*, *Apis***, Linnaeus, 1758 (Hymenoptera) Op. 1828
***undatus*, *Erotylus***, Olivier, 1792 (Coleoptera) Op. 1824
***variolosa*, *Buprestis***, Paykull, [1799] (Coleoptera) Op. 1825
*viridis*, *Motacilla*, Wilkes, 1817 (Aves) Op. 1859
***wesleyi*, *Endodonta* (*Pterodiscus*)**, Sykes, 1896 (Gastropoda) Op. 1845

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*africanus, Equus*, Heuglin & Fitzinger, 1866 (Mammalia) . . . . 28, 125, 192, 286
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*americana, Ampelis*, Wilson, 1808 (Aves) . . . . . 187
*aperea, Cavia*, Erxleben, 1777 (Mammalia) . . . . . 28, 125, 192, 286
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*Bathyarca* Kobelt, 1891 (Bivalvia) . . . . . 173
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*Belemnosepia* Buckland & Agassiz *in* Buckland, 1836 (Coleoidea) . . . . . 253
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*bimaculatus, Labrus*, Linnaeus, 1758 (Osteichthyes) . . . . . 106
*bollensis, Loligo*, Schübler *in* Zieten, 1832 (Coleoidea) . . . . . 253
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*Cacoxenus* Loew, 1858 (Diptera) . . . . . 21
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*cincta, Domomyza*, Rondani, 1856 (Diptera) . . . . . 21
*clavatus, Conchiosaurus*, Meyer, [1833] (Reptilia) . . . . . 270
*concharum, Dodecaceria*, Örsted, 1843 (Polychaeta) . . . . . 45
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*costatum, Oosternum*, Sharp, 1882 (Coleoptera) . . . . . 99, 278
*Crenitis* Bedel, 1881 (Coleoptera) . . . . . 99, 278
*crenulatus, Byrrhus*, Rossi, 1794 (Coleoptera) . . . . . 99, 278
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*Domomyza* Rondani, 1856 (Diptera) . . . . . 21

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*graminum*, *Tachydromia*, Fallén, 1815 (Diptera) . . . . . 104
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*guanicoe*, *Camelus*, Müller, [1776] (Mammalia) . . . . . 28, 125, 192, 286

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